IV. Overview of Final Regulation

This final rule sets forth the methodology for the national PPS applicable to all Medicare home health services covered under both Part A and Part B. This final rule incorporates a national 60-day episode payment for all of the reasonable costs of services furnished to an eligible beneficiary under a Medicare home health plan of care. This section describes the components of the national 60-day episode payment and the methodology and data used in computation.

A. Costs and Services Covered by the Payment

The prospective payment applies to all home health services set forth in section 1861(m) of the Act that are covered and paid on a reasonable cost basis under the Medicare home health benefit (except osteoporosis drugs as defined in 1861(kk) which are paid outside PPS) as of the date of the enactment of the BBA, including medical supplies. DME is a covered home health service that is not currently paid on a reasonable cost basis, but is paid on a fee schedule basis when covered as a home health service under the Medicare home health benefit. Under the HHA PPS, DME covered as a home health service as part of the Medicare home health benefit will continue

to be paid under the DME fee schedule. A separate
payment amount in addition to the prospective payment
amount for home health services will be made for DME
currently covered as a home health service under the PPS.
Although the covered osteoporosis drug under the home
health benefit is currently paid on a reasonable cost
basis, section 4603(c)(2)(A) of the BBA amended section
1833(a)(2)(A) of the Act to specifically exclude it from
the prospective payment rate. In addition, unlike DME
which is now excluded from the statutorily required
consolidated billing requirement, the osteoporosis drug
is included in the consolidated billing requirements.

B. Data Sources Used for the Development of the Payment

1. Audited Cost Report Data

Audit Sample Methodology

As discussed in the response to comments section, we
provided an additional time period for intermediaries
serving providers in the audited sample to resubmit
audited cost reports ending in FY 1997 if the cost
reports had been appealed and reopened. This provided us
with the opportunity to include revised data in the
calculation of the final rates if any of the audited cost
reports in the original sample had been appealed,

reopened or revised as of January 2000. The result was
that we added an additional seven providers from whom we
have audited cost report data for FY 1997, resulting in a
total of 574 cost reports that have been used in the
final rate calculations in this rule. The ?window of
opportunity" resulted in an additional seven audited cost
reports. Although the new total number of audited cost
reports increased to 574, however, we used only 563 of
the 574 providers in the developing of the impacts. From
1997 to 1998, 11 of the 574 providers either closed or
merged with another provider. As stated above, we are
using CY 1998 utilization data in the PPS rate
calculation. There was not 1998 utilization data to
match to the audited cost report data for the 11
providers that closed or merged.

! **Updating to September 30, 2001**

Before computing the average cost per visit for each
discipline that would be used to calculate the
prospective payment rate, we adjusted the costs from the
audit sample by the latest available market basket
factors to reflect expected cost increases occurring
between the cost reporting periods ending in FY 1997 to
September 30, 2001. Multiplying nominal dollars for a

given FY end by their respective inflation adjustment factor will express those dollars in the dollar level for the FY ending September 30, 2001. Therefore, we multiplied the total costs for each provider by the appropriate inflation factor shown in the table below. See section IV.B.2. of this regulation for a detailed description of the market basket.

❗ Nonroutine Medical Supplies Paid on a Reasonable Cost Basis Under a Home Health Plan of Care

Before computing the average cost per episode for non-routine medical supplies paid on a reasonable cost basis under a home health plan of care, we also adjusted the audited cost report data for nonroutine medical supplies using the latest market basket factors to reflect expected cost increases occurring between the cost reporting periods ending in FY 1997 to September 30, 2001.

❗ Adjusting Costs for Providers Impacted by the Per-Visit Limits

For cost reporting periods ending in FY 1997, Medicare recognized reasonable costs as the lower of the provider's actual costs or the per-visit limit applied in the aggregate for the six disciplines. Because some

providers' costs were higher than the per-visit limits

applied in the aggregate for the six disciplines, it was

necessary to adjust their costs in order to reflect only

those costs on which the provider's payment was based.

The adjustment factor was calculated by dividing a

provider's total visit limit by the total Medicare costs,

but only if the total visit limit was less than the total

Medicare costs. For those providers who were not

impacted by the visit limit, (that is, those subject to

their actual reasonable costs) no adjustment was

necessary and the adjustment factor was set equal to one.

The adjustment factor was applied to each provider's

total costs for each discipline. Summing each provider's

updated, weighted, and adjusted total costs by the sum of

visits for each discipline results in the non-

standardized, updated, weighted, and visit limit adjusted

average cost per visit by discipline.

2. Home Health Agency Market Basket Index

     The data used to develop the HHA PPS payments were

adjusted using the latest available market basket factors

to reflect expected cost increases occurring between cost

reporting periods contained in our database and September

30, 2001. The following inflation factors were used in

calculating the HHA PPS:

Factors for Inflating Database Dollars to September 30, 2001

FY end	1996	1997
October 31....................	1.15736	
November 30...................	1.15468	
December 31...................	1.15203	
January 31....................	....	1.14946
February 28...................	....	1.14697
March 31......................	....	1.14451
April 30......................	....	1.14203
May 31........................	....	1.13952
June 30.......................	....	1.13693
July 31.......................	....	1.13420
August 31.....................	....	1.13132
September 30..................	....	1.12841

For each of fiscal years 2002 and 2003, section 1895(b)(3)(B)(ii) of the Act requires the standard prospective payment amounts to be increased by a factor equal to the home health market basket minus 1.1 percentage points. In addition, for any subsequent fiscal years, the statute requires that the rates be increased by the applicable home health market basket index change.

3. Claims Data

    We also conducted analysis on an episode database created from the 1997 and 1998 National Claims History Files using 60-day episodes to define episode lengths. These data were based on use of home health services under the current system. We built a CY 1998 episode data base parallel to the construction of the CY 1997 episode data base set forth in the proposed rule at 64 FR 58149.

Table 1--Comparison of the Distribution of Consecutive 60-Day Episodes that

Occurred in Calendar Years 1997 and 1998

Total Number of Consecutive 60-day Episodes	Distribution based on only 60-day episodes that occurred in the CY 1997 period (percent)	Distribution based on only 60-day episodes that occurred in the CY 1998 period (percent)
1	51%	59.5%
2	18%	19.3%
3	8%	7.7%
4	5%	4.1%
5	4%	2.5%
6	3%	1.7%
7	10%	5.2%

Table 2--Comparison of the Average Number of Visits Per Episode for Each Discipline for CY 1997 and CY 1998 and Episodes in CY 1997 and CY 1998 with Five or More Visits

Average Number of Visits by Discipline	Average Based on Only 60-Day Episodes That Fell into the CY 1997 Period	Average Based on Only 60-Day Episodes That Fell into the CY 1997 Period with Visit>4	Average Based on Only 60-Day Episodes That Fell into the CY 1998 Period	Average Based on Only 60-Day Episodes That Fell into the CY 1998 Period with Visit>4
Skilled Nursing Services	12.55	14.69	12.1	14.08
Physical Therapy Services	2.35	2.74	2.59	3.05
Occupational Therapy Services	0.41	0.48	0.45	0.53
Speech Pathology Services	0.15	0.18	0.15	0.18
Medical Social Services	0.31	0.36	0.28	0.32
Home Health Aide Services	14.59	17.59	11.28	13.4
Total for all Disciplines	30.36	36.04	26.85	31.56

Table 3--Analysis of the Distribution of Disciplines across a Series of 60-Day Episodes in CY 1998

Total Number of 60-Day Episodes	Episode Number Within Series of 60-Day Episodes	Percent of Skilled Nursing Services	Percent of Home Health Aide Services	Percent of Occupational Therapy Services	Percent of Speech Pathology Services	Percent of Medical Social Services	Percent of Physical Therapy Services
1	1	50%	24%	3%	1%	2%	20%
2	1	46%	34%	3%	1%	1%	15%
2	2	46%	37%	2%	1%	1%	13%
3	1	46%	38%	2%	1%	1%	11%
3	2	45%	41%	2%	1%	1%	10%
3	3	46%	42%	2%	1%	1%	9%
4	1	45%	43%	2%	1%	1%	8%
4	2	45%	46%	1%	1%	1%	7%
4	3	45%	46%	1%	0%	1%	7%
4	4	46%	45%	1%	0%	1%	6%
5	1	45%	46%	1%	0%	1%	6%
5	2	44%	48%	1%	0%	1%	5%
5	3	44%	49%	1%	0%	1%	5%
5	4	44%	49%	1%	0%	1%	5%

Total Number of 60-Day Episodes	Episode Number Within Series of 60-Day Episodes	Percent of Skilled Nursing Services	Percent of Home Health Aide Services	Percent of Occupational Therapy Services	Percent of Speech Pathology Services	Percent of Medical Social Services	Percent of Physical Therapy Services
5	5	45%	47%	1%	0%	1%	5%
6	1	44%	48%	1%	0%	1%	6%
6	2	43%	50%	1%	0%	1%	5%
6	3	43%	51%	1%	0%	1%	4%
6	4	43%	51%	1%	0%	1%	4%
6	5	44%	50%	1%	0%	1%	4%
6	6	45%	49%	1%	0%	1%	4%
7	1	40%	56%	1%	0%	1%	3%
7	2	41%	55%	0%	0%	1%	3%
7	3	41%	56%	0%	0%	1%	3%
7	4	41%	56%	0%	0%	1%	2%
7	5	41%	55%	0%	0%	1%	2%
7	6	42%	55%	0%	0%	1%	2%
7	7	42%	55%	0%	0%	0%	2%
8	1	42%	53%	1%	0%	1%	4%
8	2	42%	54%	1%	0%	1%	3%
8	3	42%	53%	0%	0%	1%	3%

Total Number of 60-Day Episodes	Episode Number Within Series of 60-Day Episodes	Percent of Skilled Nursing Services	Percent of Home Health Aide Services	Percent of Occupational Therapy Services	Percent of Speech Pathology Services	Percent of Medical Social Services
8	4	43%	54%	0%	0%	
8	5	43%	54%	0%	0%	(
8	6	43%	53%	0%	0%	(
8	7	44%	53%	0%	0%	(
8	8	44%	52%	0%	0%	(

! National Part B Claims History File-Medical Supplies

Nonroutine medical supplies are also a covered home health service listed in section 1861(m)(5) of the Act. The law governing PPS requires medical supplies to be included in the prospective payment rate and to be subject to the consolidated billing requirements. As discussed in the proposed rule, before PPS implementation, HHAs were not required to bundle all home health services. Specifically, nonroutine medical supplies that have a duplicate Part B code could have been furnished by a supplier rather than the HHA and paid under Part B prior to PPS. Under the current IPS, some HHAs may have chosen to unbundle those non-routine medical supplies that had a corresponding Part B payment.

In order to determine the scope of the non-routine medical supplies that could have been unbundled under the current system, we identified 199 HCPCs codes representing those items that would fall into the possible "unbundled nonroutine medical supply" category.

As discussed in the response to comment section of this rule, based on several comments we re-examined our approach to the original list of 199 codes. Our analysis yielded a payment approach to non-routine medical supplies included in the PPS rates that uses 178 Part B codes that could have possibly been unbundled to Part B before PPS. We performed the same data analysis on the CY 1998 claims data and the revised list of 178 Part B codes to develop the appropriate payment adjustment amount for non-routine medical supplies that could possibly be unbundled to Part B before PPS that is added to the non-standardized episode payment.

We pulled all claims with the corresponding HCPCs codes from the Part B national claims history file. In order to determine whether the HCPCs codes were related to the beneficiary receiving home health services under a home health plan of care, we linked every Part B claim with one or more of the 199 HCPCs codes to home health

episodes from our episode database for both CY 1997 and
CY 1998 by beneficiary and dates of service. If a
beneficiary received home health services during a 60-day
episode and there was a corresponding Part B claim with
one of the 178 HCPCs codes that was billed during the
same 60-day episode, we identified the item as related to
the home health stay. We proposed an additional payment
amount of $6.08 to the 60-day episode base rate for those
nonroutine medical supplies with corresponding Part B
codes that may have been unbundled under the interim
payment system.

!   National Part B Claims History File-Therapies

As discussed above in section III. of this final
rule, **Analysis and Responses to Public Comments**, we
conducted a parallel analysis of Part B therapy claims
that could possibly be related to a home health stay
during CY 1997 and CY 1998. Prior to consolidated
billing requirements governing PPS, HHAs may have
unbundled therapy services to Part B. We believe that
this was a rare occurrence. Under PPS, HHAs will be
responsible for providing physical therapy, speech
language pathology services and occupational therapy
either directly or under arrangement. Under subsequent

analysis, based upon comments received, we believe that there is a need to recognize these therapy services that could have been unbundled to Part B before PPS in the PPS rates. We conducted claims analysis similar to our approach to identify those non-routine medical supplies that could have been unbundled to Part B. We identified the three therapy services in both Part B outpatient and Part B physician/supplier claims data.

HCFA identified 54 HCPCs codes that represent those services that could fall into the possible "unbundled therapy related services" category under Part B Physician/Supplier claims for patients under a home health plan of care before implementation of PPS. We also identified under Part B, therapy services that could have been unbundled and provided in an hospital outpatient setting to patients under a home health plan of care before implementation of PPS. We identified the 17 revenue center code ranges for physical, occupational, and speech therapy services that could have been billed under Part B in a hospital outpatient setting for patients under a home health plan of care before implementation of PPS. HCFA pulled all claims from the Part B Physician/Supplier claims with the corresponding

54 codes above and all claims from the Part B hospital outpatient claims with the corresponding 17 revenue center code ranges. As with our analysis of nonroutine medical supplies that could have been unbundled to Part B before implementation of PPS, HCFA matched claims for a beneficiary receiving home health services under a home health plan of care by linking the Part B claims to home health episodes from our 1998 episode database, by beneficiary and dates of service. If a beneficiary received home health services during a 60-day episode and there was a corresponding part B claim with either one of the 54 HCPCs or a revenue center code within one of the 17 revenue center code ranges for therapy services, we identified the Part B service as related to the home health stay.

As a result of our therapy analysis, we are recognizing an additional adjustment to the 60-day non-standardized episode amount for therapy services that could have been unbundled to Part B before implementation of PPS. The per episode possible unbundled therapy related service amounts billed under Part B included in the PPS rate were calculated by summing the allowed charges for the 54 HCPCs for physician/supplier and the

costs for the 17 therapy revenue center code ranges for
hospital outpatient in calendar year 1998 for
beneficiaries under a home health plan of care. That
total was divided by the total number of episodes in
calendar year 1998 from the episode database. The
methodology for the adjustment is set forth in section
IV.C. of this regulation.

4. Hospital Wage Index

    Sections 1895(b)(4)(A)(ii) and (b)(4)(C) of the Act,
require the Secretary to establish area wage adjustment
factors that reflect the relative level of wages and
wage-related costs applicable to the furnishing of health
services and to provide appropriate adjustments to the
episode payment amounts under PPS to account for area
wage differences. The wage adjustment factors may be the
factors used by the Secretary for purposes of section
1886(d)(3)(E) of the Act. The statute allows the
Secretary to use the area where the services are
furnished or such area as the Secretary may specify for
the wage index adjustment. To be consistent with the
wage index adjustment under the current interim payment
system, we proposed and will retain applying the
appropriate wage index value to the labor portion of the

PPS rates based on the geographic area in which the beneficiary received home health services.

In addition, section 1895(b)(3)(A)(i) of the Act requires the Secretary to standardize the cost data used in developing the PPS payment amount for wage levels among different HHAs in a budget-neutral manner. The wage index adjustment to the PPS rates must be made in a manner that does not result in aggregate payments that are greater or less than those that would have otherwise been made if the PPS rates were not adjusted by the wage index.

Each HHA's labor market area is determined based on definitions of Metropolitan Statistical Areas (MSAs) issued by the Office of Management and Budget (OMB). In establishing the final HHA PPS rates, we used the most recent pre-floor and pre-reclassified hospital wage index without regard to whether these hospitals have been classified to a new geographic area by the Medicare Geographic Reclassification Board. As stated in the response to comments, we believe the use of the pre-floor and pre-reclassified hospital wage index data results in an appropriate adjustment to the labor portion of costs as required by law.

Table 4A--FY 2000 Wage Index For Rural Areas--Pre-floor and Pre-reclassified

WAGE INDEX FOR RURAL AREAS

Nonurban Area	Wage Index
Alabama	0.7391
Alaska	1.2058
Arizona	0.8545
Arkansas	0.7236
California	0.9952
Colorado	0.8814
Connecticut	1.2414
Delaware	0.9167
Florida	0.8987
Georgia	0.8095
Guam	0.7268
Hawaii	1.0728
Idaho	0.8652
Illinois	0.8048
Indiana	0.8397
Iowa	0.7927
Kansas	0.7461
Kentucky	0.8043
Louisiana	0.7382
Maine	0.8640
Maryland	0.8632
Massachusetts	1.1370

Nonurban Area	Wage Index
Michigan	0.8815
Minnesota	0.8670
Mississippi	0.7307
Missouri	0.7724
Montana	0.8396
Nebraska	0.8008
Nevada	0.9098
New Hampshire	0.9906
New Jersey[1]	......
New Mexico	0.8379
New York	0.8637
North Carolina	0.8290
North Dakota	0.7648
Ohio	0.8650
Oklahoma	0.7256
Oregon	0.9868
Pennsylvania	0.8525
Puerto Rico	0.4249
Rhode Island[1]	......
South Carolina	0.8264
South Dakota	0.7577
Tennessee	0.7651
Texas	0.7471
Utah	0.8907
Vermont	0.9408
Virginia	0.7904

Nonurban Area	Wage Index
Virgin Islands	0.6389
Washington	1.0447
West Virginia	0.8069
Wisconsin	0.8760
Wyoming	0.8860

[1]All counties within the State are classified as urban.

Table 4B--Wage Index For Urban Areas--FY 2000 Pre-floor

and Pre-reclassified

MSA	Urban Area (Constituent Counties)	Wage Index
0040	Abilene, TX 　Taylor, TX	0.8180
0060	Aguadilla, PR 　Aguada, PR 　Aguadilla, PR 　Moca, PR	0.3814
0080	Akron, OH Portage, OH Summit, OH	1.0164
0120	Albany, GA Dougherty, GA Lee, GA	1.0373
0160	Albany-Schenectady-Troy, NY Albany, NY Montgomery, NY Rensselaer, NY Saratoga, NY Schenectady, NY Schoharie, NY	0.8755
0200	Albuquerque, NM Bernalillo, NM Sandoval, NM Valencia, NM	0.8500
0220	Alexandria, LA Rapides, LA	0.7870
0240	Allentown-Bethlehem-Easton, PA Carbon, PA Lehigh, PA Northampton, PA	1.0228
0280	Altoona, PA Blair, PA	0.9343

MSA	Urban Area (Constituent Counties)	Wage Index
0320	Amarillo, TX Potter, TX Randall, TX	0.8381
0380	Anchorage, AK Anchorage, AK	1.2860
0440	Ann Arbor, MI Lenawee, MI Livingston, MI Washtenaw, MI	1.1484
0450	Anniston, AL Calhoun, AL	0.8463
0460	Appleton-Oshkosh-Neenah, WI Calumet, WI Outagamie, WI Winnebago, WI	0.8913
0470	Arecibo, PR Arecibo, PR Camuy, PR Hatillo, PR	0.4815
0480	Asheville, NC Buncombe, NC Madison, NC	0.8885
0500	Athens, GA Clarke, GA Madison, GA Oconee, GA	0.9705

MSA	Urban Area (Constituent Counties)	Wage Index
0520	Atlanta, GA Barrow, GA Bartow, GA Carroll, GA Cherokee, GA Clayton, GA Cobb, GA Coweta, GA DeKalb, GA Douglas, GA Fayette, GA Forsyth, GA Fulton, GA Gwinnett, GA Henry, GA Newton, GA Paulding, GA Pickens, GA Rockdale, GA Spalding, GA Walton, GA	1.0051
0560	Atlantic-Cape May, NJ Atlantic, NJ Cape May, NJ	1.1311
0580	Auburn-Opelka, AL Lee, AL	0.9619
0600	Augusta-Aiken, GA-SC Columbia, GA McDuffie, GA Richmond, GA Aiken, SC Edgefield, SC	0.9014
0640	Austin-San Marcos, TX Bastrop, TX Caldwell, TX Hays, TX Travis, TX Williamson, TX	0.9082

MSA	Urban Area (Constituent Counties)	Wage Index
0680	Bakersfield, CA Kern, CA	0.9531
0720	Baltimore, MD Anne Arundel, MD Baltimore, MD Baltimore City, MD Carroll, MD Harford, MD Howard, MD Queen Anne's, MD	0.9892
0733	Bangor, ME Penobscot, ME	0.9610
0743	Barnstable-Yarmouth, MA Barnstable, MA	1.3303
0760	Baton Rouge, LA Ascension, LA East Baton Rouge, LA Livingston, LA West Baton Rouge, LA	0.8708
0840	Beaumont-Port Arthur, TX Hardin, TX Jefferson, TX Orange, TX	0.8624
0860	Bellingham, WA Whatcom, WA	1.1395
0870	Benton Harbor, MI Berrien, MI	0.8458
0875	Bergen-Passaic, NJ Bergen, NJ Passaic, NJ	1.2029
0880	Billings, MT Yellowstone, MT	1.0039
0920	Biloxi-Gulfport-Pascagoula, MS Hancock, MS Harrison, MS Jackson, MS	0.7868

MSA	Urban Area (Constituent Counties)	Wage Index
0960	Binghamton, NY Broome, NY Tioga, NY	0.8751
1000	Birmingham, AL Blount, AL Jefferson, AL St. Clair, AL Shelby, AL	0.8995
1010	Bismarck, ND Burleigh, ND Morton, ND	0.7759
1020	Bloomington, IN Monroe, IN	0.8593
1040	Bloomington-Normal, IL McLean, IL	0.8994
1080	Boise City, ID Ada, ID Canyon, ID	0.9060
1123	Boston-Worcester-Lawrence-Lowell-Brockton, MA-NH Bristol, MA Essex, MA Middlesex, MA Norfolk, MA Plymouth, MA Suffolk, MA Worcester, MA Hillsborough, NH Merrimack, NH Rockingham, NH Strafford, NH	1.1359
1125	Boulder-Longmont, CO Boulder, CO	0.9945
1145	Brazoria, TX Brazoria, TX	0.8517

MSA	Urban Area (Constituent Counties)	Wage Index
1150	Bremerton, WA Kitsap, WA	1.1012
1240	Brownsville-Harlingen-San Benito, TX Cameron, TX	0.9213
1260	Bryan-College Station, TX Brazos, TX	0.8510
1280	Buffalo-Niagara Falls, NY Erie, NY Niagara, NY	0.9605
1303	Burlington, VT Chittenden, VT Franklin, VT Grand Isle, VT	1.0559
1310	Caguas, PR Caguas, PR Cayey, PR Cidra, PR Gurabo, PR San Lorenzo, PR	0.4561
1320	Canton-Massillon, OH Carroll, OH Stark, OH	0.8772
1350	Casper, WY Natrona, WY	0.9200
1360	Cedar Rapids, IA Linn, IA	0.9019
1400	Champaign-Urbana, IL Champaign, IL	0.9164
1440	Charleston-North Charleston, SC Berkeley, SC Charleston, SC Dorchester, SC	0.8989
1480	Charleston, WV Kanawha, WV Putnam, WV	0.9096

MSA	Urban Area (Constituent Counties)	Wage Index
1520	Charlotte-Gastonia-Rock Hill, NC-SC Cabarrus, NC Gaston, NC Lincoln, NC Mecklenburg, NC Rowan, NC Stanly, NC Union, NC York, SC	0.9434
1540	Charlottesville, VA Albemarle, VA Charlottesville City, VA Fluvanna, VA Greene, VA	1.0575
1560	Chattanooga, TN-GA Catoosa, GA Dade, GA Walker, GA Hamilton, TN Marion, TN	0.9732
1580	Cheyenne, WY Laramie, WY	0.8176
1600	Chicago, IL Cook, IL DeKalb, IL DuPage, IL Grundy, IL Kane, IL Kendall, IL Lake, IL McHenry, IL Will, IL	1.0874
1620	Chico-Paradise, CA Butte, CA	1.0391

MSA	Urban Area (Constituent Counties)	Wage Index
1640	Cincinnati, OH-KY-IN Dearborn, IN Ohio, IN Boone, KY Campbell, KY Gallatin, KY Grant, KY Kenton, KY Pendleton, KY Brown, OH Clermont, OH Hamilton, OH Warren, OH	0.9419
1660	Clarksville-Hopkinsville, TN-KY Christian, KY Montgomery, TN	0.8090
1680	Cleveland-Lorain-Elyria, OH Ashtabula, OH Cuyahoga, OH Geauga, OH Lake, OH Lorain, OH Medina, OH	0.9689
1720	Colorado Springs, CO El Paso, CO	0.9218
1740	Columbia, MO Boone, MO	0.8905
1760	Columbia, SC Lexington, SC Richland, SC	0.9358
1800	Columbus, GA-AL Russell, AL Chattahoochee, GA Harris, GA Muscogee, GA	0.8511

MSA	Urban Area (Constituent Counties)	Wage Index
1840	Columbus, OH Delaware, OH Fairfield, OH Franklin, OH Licking, OH Madison, OH Pickaway, OH	0.9908
1880	Corpus Christi, TX Nueces, TX San Patricio, TX	0.8702
1890	Corvallis, OR Benton, OR	1.1088
1900	Cumberland, MD-WV Allegany, MD Mineral, WV	0.8802
1920	Dallas, TX Collin, TX Dallas, TX Denton, TX Ellis, TX Henderson, TX Hunt, TX Kaufman, TX Rockwall, TX	0.9607
1950	Danville, VA Danville City, VA Pittsylvania, VA	0.9062
1960	Davenport-Moline-Rock Island, IA-IL Scott, IA Henry, IL Rock Island, IL	0.8707
2000	Dayton-Springfield, OH Clark, OH Greene, OH Miami, OH Montgomery, OH	0.9461

MSA	Urban Area (Constituent Counties)	Wage Index
2020	Daytona Beach, FL Flagler, FL Volusia, FL	0.8988
2030	Decatur, AL Lawrence, AL Morgan, AL	0.8680
2040	Decatur, IL Macon, IL	0.8322
2080	Denver, CO Adams, CO Arapahoe, CO Denver, CO Douglas, CO Jefferson, CO	1.0190
2120	Des Moines, IA Dallas, IA Polk, IA Warren, IA	0.8755
2160	Detroit, MI Lapeer, MI Macomb, MI Monroe, MI Oakland, MI St. Clair, MI Wayne, MI	1.0422
2180	Dothan, AL Dale, AL Houston, AL	0.7799
2190	Dover, DE Kent, DE	0.9336
2200	Dubuque, IA Dubuque, IA	0.8521
2240	Duluth-Superior, MN-WI St. Louis, MN Douglas, WI	1.0166

MSA	Urban Area (Constituent Counties)	Wage Index
2281	Dutchess County, NY Dutchess, NY	1.0553
2290	Eau Claire, WI Chippewa, WI Eau Claire, WI	0.8958
2320	El Paso, TX El Paso, TX	0.8948
2330	Elkhart-Goshen, IN Elkhart, IN	0.9380
2335	Elmira, NY Chemung, NY	0.8534
2340	Enid, OK Garfield, OK	0.7954
2360	Erie, PA Erie, PA	0.9024
2400	Eugene-Springfield, OR Lane, OR	1.0604
2440	Evansville-Henderson, IN-KY Posey, IN Vanderburgh, IN Warrick, IN Henderson, KY	0.8304
2520	Fargo-Moorhead, ND-MN Clay, MN Cass, ND	0.8621
2560	Fayetteville, NC Cumberland, NC	0.8495
2580	Fayetteville-Springdale-Rogers, AR Benton, AR Washington, AR	0.7774
2620	Flagstaff, AZ-UT Coconino, AZ Kane, UT	1.0349

MSA	Urban Area (Constituent Counties)	Wage Index
2640	Flint, MI Genesee, MI	1.1021
2650	Florence, AL Colbert, AL Lauderdale, AL	0.7928
2655	Florence, SC Florence, SC	0.8619
2670	Fort Collins-Loveland, CO Larimer, CO	1.0303
2680	Ft. Lauderdale, FL Broward, FL	1.0173
2700	Fort Myers-Cape Coral, FL Lee, FL	0.8951
2710	Fort Pierce-Port St. Lucie, FL Martin, FL St. Lucie, FL	0.9999
2720	Fort Smith, AR-OK Crawford, AR Sebastian, AR Sequoyah, OK	0.7844
2750	Fort Walton Beach, FL Okaloosa, FL	0.8714
2760	Fort Wayne, IN Adams, IN Allen, IN De Kalb, IN Huntington, IN Wells, IN Whitley, IN	0.9097
2800	Forth Worth-Arlington, TX Hood, TX Johnson, TX Parker, TX Tarrant, TX	0.9836

MSA	Urban Area (Constituent Counties)	Wage Index
2840	Fresno, CA Fresno, CA Madera, CA	1.0263
2880	Gadsden, AL Etowah, AL	0.8689
2900	Gainesville, FL Alachua, FL	1.0103
2920	Galveston-Texas City, TX Galveston, TX	0.9733
2960	Gary, IN Lake, IN Porter, IN	0.9391
2975	Glens Falls, NY Warren, NY Washington, NY	0.8607
2980	Goldsboro, NC Wayne, NC	0.8334
2985	Grand Forks, ND-MN Polk, MN Grand Forks, ND	0.9098
2995	Grand Junction, CO Mesa, CO	0.9189
3000	Grand Rapids-Muskegon-Holland, MI Allegan, MI Kent, MI Muskegon, MI Ottawa, MI	1.0136
3040	Great Falls, MT Cascade, MT	1.0460
3060	Greeley, CO Weld, CO	0.9723
3080	Green Bay, WI Brown, WI	0.9133

MSA	Urban Area (Constituent Counties)	Wage Index
3120	Greensboro-Winston-Salem-High Point, NC Alamance, NC Davidson, NC Davie, NC Forsyth, NC Guilford, NC Randolph, NC Stokes, NC Yadkin, NC	0.9038
3150	Greenville, NC Pitt, NC	0.9501
3160	Greenville-Spartanburg-Anderson, SC Anderson, SC Cherokee, SC Greenville, SC Pickens, SC Spartanburg, SC	0.9189
3180	Hagerstown, MD Washington, MD	0.8843
3200	Hamilton-Middletown, OH Butler, OH	0.8947
3240	Harrisburg-Lebanon-Carlisle, PA Cumberland, PA Dauphin, PA Lebanon, PA Perry, PA	0.9918
3283	[1,2]Hartford, CT Hartford, CT Litchfield, CT Middlesex, CT Tolland, CT	1.1716
3285	Hattiesburg, MS Forrest, MS Lamar, MS	0.7634

MSA	Urban Area (Constituent Counties)	Wage Index
3290	Hickory-Morganton-Lenoir, NC Alexander, NC Burke, NC Caldwell, NC Catawba, NC	0.9113
3320	Honolulu, HI Honolulu, HI	1.1477
3350	Houma, LA Lafourche, LA Terrebonne, LA	0.7837
3360	Houston, TX Chambers, TX Fort Bend, TX Harris, TX Liberty, TX Montgomery, TX Waller, TX	0.9388
3400	Huntington-Ashland, WV-KY-OH Boyd, KY Carter, KY Greenup, KY Lawrence, OH Cabell, WV Wayne, WV	0.9758
3440	Huntsville, AL Limestone, AL Madison, AL	0.8823
3480	Indianapolis, IN Boone, IN Hamilton, IN Hancock, IN Hendricks, IN Johnson, IN Madison, IN Marion, IN Morgan, IN Shelby, IN	0.9793

MSA	Urban Area (Constituent Counties)	Wage Index
3500	Iowa City, IA Johnson, IA	0.9608
3520	Jackson, MI Jackson, MI	0.8841
3560	Jackson, MS Hinds, MS Madison, MS Rankin, MS	0.8387
3580	Jackson, TN Madison, TN Chester, TN	0.8601
3600	Jacksonville, FL Clay, FL Duval, FL Nassau, FL St. Johns, FL	0.8958
3605	Jacksonville, NC Onslow, NC	0.7853
3610	Jamestown, NY Chautauqua, NY	0.7858
3620	Janesville-Beloit, WI Rock, WI	0.9657
3640	Jersey City, NJ Hudson, NJ	1.1676
3660	Johnson City-Kingsport-Bristol, TN-VA Carter, TN Hawkins, TN Sullivan, TN Unicoi, TN Washington, TN Bristol City, VA Scott, VA Washington, VA	0.8854
3680	Johnstown, PA Cambria, PA Somerset, PA	0.8641

MSA	Urban Area (Constituent Counties)	Wage Index
3700	Jonesboro, AR Craighead, AR	0.7232
3710	Joplin, MO Jasper, MO Newton, MO	0.7679
3720	Kalamazoo-Battlecreek, MI Calhoun, MI Kalamazoo, MI Van Buren, MI	0.9982
3740	Kankakee, IL Kankakee, IL	0.8599
3760	Kansas City, KS-MO Johnson, KS Leavenworth, KS Miami, KS Wyandotte, KS Cass, MO Clay, MO Clinton, MO Jackson, MO Lafayette, MO Platte, MO Ray, MO	0.9322
3800	Kenosha, WI Kenosha, WI	0.9034
3810	Killeen-Temple, TX Bell, TX Coryell, TX	0.9933
3840	Knoxville, TN Anderson, TN Blount, TN Knox, TN Loudon, TN Sevier, TN Union, TN	0.9200

MSA	Urban Area (Constituent Counties)	Wage Index
3850	Kokomo, IN Howard, IN Tipton, IN	0.8919
3870	La Crosse, WI-MN Houston, MN La Crosse, WI	0.8934
3880	Lafayette, LA Acadia, LA Lafayette, LA St. Landry, LA St. Martin, LA	0.8340
3920	Lafayette, IN Clinton, IN Tippecanoe, IN	0.8810
3960	Lake Charles, LA Calcasieu, LA	0.7967
3980	Lakeland-Winter Haven, FL Polk, FL	0.8816
4000	Lancaster, PA Lancaster, PA	0.9256
4040	Lansing-East Lansing, MI Clinton, MI Eaton, MI Ingham, MI	0.9978
4080	Laredo, TX Webb, TX	0.8323
4100	Las Cruces, NM Dona Ana, NM	0.8591
4120	Las Vegas, NV-AZ Mohave, AZ Clark, NV Nye, NV	1.1259
4150	Lawrence, KS Douglas, KS	0.8223

MSA	Urban Area (Constituent Counties)	Wage Index
4200	Lawton, OK Comanche, OK	0.9533
4243	Lewiston-Auburn, ME Androscoggin, ME	0.8900
4280	Lexington, KY Bourbon, KY Clark, KY Fayette, KY Jessamine, KY Madison, KY Scott, KY Woodford, KY	0.8532
4320	Lima, OH Allen, OH Auglaize, OH	0.8906
4360	Lincoln, NE Lancaster, NE	0.9671
4400	Little Rock-North Little Rock, AR Faulkner, AR Lonoke, AR Pulaski, AR Saline, AR	0.8615
4420	Longview-Marshall, TX Gregg, TX Harrison, TX Upshur, TX	0.8739
4480	Los Angeles-Long Beach, CA Los Angeles, CA	1.2052
4520	Louisville, KY-IN Clark, IN Floyd, IN Harrison, IN Scott, IN Bullitt, KY Jefferson, KY Oldham, KY	0.9382

MSA	Urban Area (Constituent Counties)	Wage Index
4600	Lubbock, TX Lubbock, TX	0.8412
4640	Lynchburg, VA Amherst, VA Bedford, VA Bedford City, VA Campbell, VA Lynchburg City, VA	0.8815
4680	Macon, GA Bibb, GA Houston, GA Jones, GA Peach, GA Twiggs, GA	0.8531
4720	Madison, WI Dane, WI	0.9730
4800	Mansfield, OH Crawford, OH Richland, OH	0.8476
4840	Mayaguez, PR Anasco, PR Cabo Rojo, PR Hormigueros, PR Mayaguez, PR Sabana Grande, PR San German, PR	0.4675
4880	McAllen-Edinburg-Mission, TX Hidalgo, TX	0.8121
4890	Medford-Ashland, OR Jackson, OR	1.0493
4900	Melbourne-Titusville-Palm Bay, FL Brevard, Fl	0.9297

MSA	Urban Area (Constituent Counties)	Wage Index
4920	Memphis, TN-AR-MS Crittenden, AR DeSoto, MS Fayette, TN Shelby, TN Tipton, TN	0.8245
4940	Merced, CA Merced, CA	1.0278
5000	Miami, FL Dade, FL	1.0234
5015	Middlesex-Somerset-Hunterdon, NJ Hunterdon, NJ Middlesex, NJ Somerset, NJ	1.1123
5080	Milwaukee-Waukesha, WI Milwaukee, WI Ozaukee, WI Washington, WI Waukesha, WI	0.9846
5120	Minneapolis-St. Paul, MN-WI Anoka, MN Carver, MN Chisago, MN Dakota, MN Hennepin, MN Isanti, MN Ramsey, MN Scott, MN Sherburne, MN Washington, MN Wright, MN Pierce, WI St. Croix, WI	1.0930
5140	Missoula, MT Missoula, MT	0.9086
5160	Mobile, AL Baldwin, AL Mobile, AL	0.8268

MSA	Urban Area (Constituent Counties)	Wage Index
5170	Modesto, CA Stanislaus, CA	1.0112
5190	Monmouth-Ocean, NJ Monmouth, NJ Ocean, NJ	1.1259
5200	Monroe, LA Ouachita, LA	0.8222
5240	Montgomery, AL Autauga, AL Elmore, AL Montgomery, AL	0.7704
5280	Muncie, IN Delaware, IN	1.0835
5330	Myrtle Beach, SC Horry, SC	0.8530
5345	Naples, FL Collier, FL	0.9840
5360	Nashville, TN Cheatham, TN Davidson, TN Dickson, TN Robertson, TN Rutherford TN Sumner, TN Williamson, TN Wilson, TN	0.9450
5380	Nassau-Suffolk, NY Nassau, NY Suffolk, NY	1.4076
5483	New Haven-Bridgeport-Stamford-Waterbury-Danbury, CT Fairfield, CT New Haven, CT	1.2357
5523	New London-Norwich, CT New London, CT	1.2429

MSA	Urban Area (Constituent Counties)	Wage Index
5560	New Orleans, LA Jefferson, LA Orleans, LA Plaquemines, LA St. Bernard, LA St. Charles, LA St. James, LA St. John The Baptist, LA St. Tammany, LA	0.9090
5600	New York, NY Bronx, NY Kings, NY New York, NY Putnam, NY Queens, NY Richmond, NY Rockland, NY Westchester, NY	1.4519
5640	Newark, NJ Essex, NJ Morris, NJ Sussex, NJ Union, NJ Warren, NJ	1.1647
5660	Newburgh, NY-PA Orange, NY Pike, PA	1.0910

MSA	Urban Area (Constituent Counties)	Wage Index
5720	Norfolk-Virginia Beach-Newport News, VA-NC Currituck, NC Chesapeake City, VA Gloucester, VA Hampton City, VA Isle of Wight, VA James City, VA Mathews, VA Newport News City, VA Norfolk City, VA Poquoson City, VA Portsmouth City, VA Suffolk City, VA Virginia Beach City VA Williamsburg City, VA York, VA	0.8441
5775	Oakland, CA Alameda, CA Contra Costa, CA	1.5059
5790	Ocala, FL Marion, FL	0.9616
5800	Odessa-Midland, TX Ector, TX Midland, TX	0.8874
5880	Oklahoma City, OK Canadian, OK Cleveland, OK Logan, OK McClain, OK Oklahoma, OK Pottawatomie, OK	0.8588
5910	Olympia, WA Thurston, WA	1.0933

MSA	Urban Area (Constituent Counties)	Wage Index
5920	Omaha, NE-IA Pottawattamie, IA Cass, NE Douglas, NE Sarpy, NE Washington, NE	1.0456
5945	Orange County, CA Orange, CA	1.1591
5960	Orlando, FL Lake, FL Orange, FL Osceola, FL Seminole, FL	0.9796
5990	Owensboro, KY Daviess, KY	0.8105
6015	Panama City, FL Bay, FL	0.9170
6020	Parkersburg-Marietta, WV-OH Washington, OH Wood, WV	0.8415
6080	Pensacola, FL Escambia, FL Santa Rosa, FL	0.8443
6120	Peoria-Pekin, IL Peoria, IL Tazewell, IL Woodford, IL	0.8350
6160	Philadelphia, PA-NJ Burlington, NJ Camden, NJ Gloucester, NJ Salem, NJ Bucks, PA Chester, PA Delaware, PA Montgomery, PA Philadelphia, PA	1.1161

MSA	Urban Area (Constituent Counties)	Wage Index
6200	Phoenix-Mesa, AZ Maricopa, AZ Pinal, AZ	0.9465
6240	Pine Bluff, AR Jefferson, AR	0.7698
6280	Pittsburgh, PA Allegheny, PA Beaver, PA Butler, PA Fayette, PA Washington, PA Westmoreland, PA	0.9635
6323	Pittsfield, MA Berkshire, MA	1.0256
6340	Pocatello, ID Bannock, ID	0.8974
6360	Ponce, PR Guayanilla, PR Juana Diaz, PR Penuelas, PR Ponce, PR Villalba, PR Yauco, PR	0.4971
6403	Portland, ME Cumberland, ME Sagadahoc, ME York, ME	0.9476
6440	Portland-Vancouver, OR-WA Clackamas, OR Columbia, OR Multnomah, OR Washington, OR Yamhill, OR Clark, WA	1.0976

MSA	Urban Area (Constituent Counties)	Wage Index
6483	Providence-Warwick-Pawtucket, RI Bristol, RI Kent, RI Newport, RI Providence, RI Washington, RI	1.0691
6520	Provo-Orem, UT Utah, UT	0.9819
6560	Pueblo, CO Pueblo, CO	0.8854
6580	Punta Gorda, FL Charlotte, FL	0.9509
6600	Racine, WI Racine, WI	0.9217
6640	Raleigh-Durham-Chapel Hill, NC Chatham, NC Durham, NC Franklin, NC Johnston, NC Orange, NC Wake, NC	0.9545
6660	Rapid City, SD Pennington, SD	0.8364
6680	Reading, PA Berks, PA	0.9537
6690	Redding, CA Shasta, CA	1.1265
6720	Reno, NV Washoe, NV	1.0656
6740	Richland-Kennewick-Pasco, WA Benton, WA Franklin, WA	1.1225

MSA	Urban Area (Constituent Counties)	Wage Index
6760	Richmond-Petersburg, VA Charles City County, VA Chesterfield, VA Colonial Heights City, VA Dinwiddie, VA Goochland, VA Hanover, VA Henrico, VA Hopewell City, VA New Kent, VA Petersburg City, VA Powhatan, VA Prince George, VA Richmond City, VA	0.9546
6780	Riverside-San Bernardino, CA Riverside, CA San Bernardino, CA	1.1211
6800	Roanoke, VA Botetourt, VA Roanoke, VA Roanoke City, VA Salem City, VA	0.8139
6820	Rochester, MN Olmsted, MN	1.1430
6840	Rochester, NY Genesee, NY Livingston, NY Monroe, NY Ontario, NY Orleans, NY Wayne, NY	0.9185
6880	Rockford, IL Boone, IL Ogle, IL Winnebago, IL	0.8784
6895	Rocky Mount, NC Edgecombe, NC Nash, NC	0.8735

MSA	Urban Area (Constituent Counties)	Wage Index
6920	Sacramento, CA El Dorado, CA Placer, CA Sacramento, CA	1.2285
6960	Saginaw-Bay City-Midland, MI Bay, MI Midland, MI Saginaw, MI	0.9287
6980	St. Cloud, MN Benton, MN Stearns, MN	0.9422
7000	St. Joseph, MO Andrew, MO Buchanan, MO	0.8944
7040	St. Louis, MO-IL Clinton, IL Jersey, IL Madison, IL Monroe, IL St. Clair, IL Franklin, MO Jefferson, MO Lincoln, MO St. Charles, MO St. Louis, MO St. Louis City, MO Warren, MO	0.9053
7080	Salem, OR Marion, OR Polk, OR	0.9950
7120	Salinas, CA Monterey, CA	1.4711
7160	Salt Lake City-Ogden, UT Davis, UT Salt Lake, UT Weber, UT	0.8855
7200	San Angelo, TX Tom Green, TX	0.7846

MSA	Urban Area (Constituent Counties)	Wage Index
7240	San Antonio, TX Bexar, TX Comal, TX Guadalupe, TX Wilson, TX	0.8318
7320	San Diego, CA San Diego, CA	1.1931
7360	San Francisco, CA Marin, CA San Francisco, CA San Mateo, CA	1.4002
7400	San Jose, CA Santa Clara, CA	1.3610

MSA	Urban Area (Constituent Counties)	Wage Index
7440	San Juan-Bayamon, PR Aguas Buenas, PR Barceloneta, PR Bayamon, PR Canovanas, PR Carolina, PR Catano, PR Ceiba, PR Comerio, PR Corozal, PR Dorado, PR Fajardo, PR Florida, PR Guaynabo, PR Humacao, PR Juncos, PR Los Piedras, PR Loiza, PR Luguillo, PR Manati, PR Morovis, PR Naguabo, PR Naranjito, PR Rio Grande, PR San Juan, PR Toa Alta, PR Toa Baja, PR Trujillo Alto, PR Vega Alta, PR Vega Baja, PR Yabucoa, PR	0.4658
7460	San Luis Obispo-Atascadero-Paso Robles, CA San Luis Obispo, CA	1.0471
7480	Santa Barbara-Santa Maria-Lompoc, CA Santa Barbara, CA	1.0820
7485	Santa Cruz-Watsonville, CA Santa Cruz, CA	1.3929
7490	Santa Fe, NM Los Alamos, NM Santa Fe, NM	1.0438

MSA	Urban Area (Constituent Counties)	Wage Index
7500	Santa Rosa, CA Sonoma, CA	1.3001
7510	Sarasota-Bradenton, FL Manatee, FL Sarasota, FL	0.9906
7520	Savannah, GA Bryan, GA Chatham, GA Effingham, GA	0.9954
7560	Scranton--Wilkes-Barre--Hazleton, PA Columbia, PA Lackawanna, PA Luzerne, PA Wyoming, PA	0.8373
7600	Seattle-Bellevue-Everett, WA Island, WA King, WA Snohomish, WA	1.1291
7610	Sharon, PA Mercer, PA	0.8284
7620	Sheboygan, WI Sheboygan, WI	0.8203
7640	Sherman-Denison, TX Grayson, TX	0.9330
7680	Shreveport-Bossier City, LA Bossier, LA Caddo, LA Webster, LA	0.9050
7720	Sioux City, IA-NE Woodbury, IA Dakota, NE	0.8549
7760	Sioux Falls, SD Lincoln, SD Minnehaha, SD	0.8777
7800	South Bend, IN St. Joseph, IN	0.9794

MSA	Urban Area (Constituent Counties)	Wage Index
7840	Spokane, WA Spokane, WA	1.0800
7880	Springfield, IL Menard, IL Sangamon, IL	0.8689
7920	Springfield, MO Christian, MO Greene, MO Webster, MO	0.7992
8003	Springfield, MA Hampden, MA Hampshire, MA	1.0678
8050	State College, PA Centre, PA	0.9139
8080	Steubenville-Weirton, OH-WV Jefferson, OH Brooke, WV Hancock, WV	0.8815
8120	Stockton-Lodi, CA San Joaquin, CA	1.0519
8140	Sumter, SC Sumter, SC	0.8239
8160	Syracuse, NY Cayuga, NY Madison, NY Onondaga, NY Oswego, NY	0.9413
8200	Tacoma, WA Pierce, WA	1.1479
8240	Tallahassee, FL Gadsden, FL Leon, FL	0.8485
8280	Tampa-St. Petersburg-Clearwater, FL Hernando, FL Hillsborough, FL Pasco, FL Pinellas, FL	0.9045

MSA	Urban Area (Constituent Counties)	Wage Index
8320	Terre Haute, IN Clay, IN Vermillion, IN Vigo, IN	0.8571
8360	Texarkana,AR-Texarkana, TX Miller, AR Bowie, TX	0.8136
8400	Toledo, OH Fulton, OH Lucas, OH Wood, OH	0.9816
8440	Topeka, KS Shawnee, KS	0.9327
8480	Trenton, NJ Mercer, NJ	1.0103
8520	Tucson, AZ Pima, AZ	0.8743
8560	Tulsa, OK Creek, OK Osage, OK Rogers, OK Tulsa, OK Wagoner, OK	0.8087
8600	Tuscaloosa, AL Tuscaloosa, AL	0.8065
8640	Tyler, TX Smith, TX	0.9370
8680	Utica-Rome, NY Herkimer, NY Oneida, NY	0.8299
8720	Vallejo-Fairfield-Napa, CA Napa, CA Solano, CA	1.3347
8735	Ventura, CA Ventura, CA	1.1456

MSA	Urban Area (Constituent Counties)	Wage Index
8750	Victoria, TX Victoria, TX	0.8379
8760	Vineland-Millville-Bridgeton, NJ Cumberland, NJ	1.0518
8780	Visalia-Tulare-Porterville, CA Tulare, CA	1.0412
8800	Waco, TX McLennan, TX	0.8076
8840	Washington, DC-MD-VA-WV District of Columbia, DC Calvert, MD Charles, MD Frederick, MD Montgomery, MD Prince Georges, MD Alexandria City, VA Arlington, VA Clarke, VA Culpeper, VA Fairfax, VA Fairfax City, VA Falls Church City, VA Fauquier, VA Fredericksburg City, VA King George, VA Loudoun, VA Manassas City, VA Manassas Park City, VA Prince William, VA Spotsylvania, VA Stafford, VA Warren, VA Berkeley, WV Jefferson, WV	1.1055
8920	Waterloo-Cedar Falls, IA Black Hawk, IA	0.8518
8940	Wausau, WI Marathon, WI	0.9446

MSA	Urban Area (Constituent Counties)	Wage Index
8960	West Palm Beach-Boca Raton, FL Palm Beach, FL	1.0013
9000	Wheeling, WV-OH Belmont, OH Marshall, WV Ohio, WV	0.7644
9040	Wichita, KS Butler, KS Harvey, KS Sedgwick, KS	0.9422
9080	Wichita Falls, TX Archer, TX Wichita, TX	0.7653
9140	Williamsport, PA Lycoming, PA	0.8450
9160	Wilmington-Newark, DE-MD New Castle, DE Cecil, MD	1.1275
9200	Wilmington, NC New Hanover, NC Brunswick, NC	0.9708
9260	Yakima, WA Yakima, WA	1.0333
9270	Yolo, CA Yolo, CA	0.9720
9280	York, PA York, PA	0.9310
9320	Youngstown-Warren, OH Columbiana, OH Mahoning, OH Trumbull, OH	0.9997
9340	Yuba City, CA Sutter, CA Yuba, CA	1.0663

MSA	Urban Area (Constituent Counties)	Wage Index
9360	Yuma, AZ Yuma, AZ	0.9925

C. Methodology Used for the Calculation of the 60-Day Episode Payment Amount

The methodology used to compute the standardized national 60-day episode payment rates was a multistep process combining each of the data sources described above. As stated above, section 1895(b)(3)(A)(i) of the Act requires that-- (1) the computation of a standard prospective payment amount that includes all costs of home health services covered and paid for on a reasonable-cost basis be initially based on the most recent audited cost report data available to the Secretary, and (2) the prospective payment amounts be standardized to eliminate the effects of case-mix and wage levels among HHAs. The budget neutrality provision, with the 15-percent reduction and contingency reduction to IPS, originated from the BBA, was delayed by OCESAA, and further amended by BBRA to delay the 15 percent reduction by one year, while eliminating the contingency reduction to IPS. The data used to develop the HHA PPS

rates were adjusted using the latest available market basket increases occurring between the cost reporting periods contained in our database and September 30, 2001.

With data described above, we calculated the standard average prospective payment amount for the 60-day episode using the following formula:

! We multiply the national mean cost per visit updated for inflation for each of the six disciplines (skilled nursing, physical therapy, occupational therapy, speech-language pathology services, medical social services, and home health aide services) in a 60-day episode by the national mean utilization for each of the six disciplines in a 60-day episode summed in the aggregate. We add to the figure derived from the above calculation, amounts for--

++ Nonroutine medical supplies paid on a reasonable-cost basis under a home health plan of care;

++ Nonroutine medical supplies that could have been unbundled to Part B that will be included under the PPS rate;

++ Therapy services that could have been unbundled to Part B that will be included under the PPS rate;

++ An OASIS adjustment to pay HHAs for estimated
ongoing OASIS assessment reporting costs; and

++ A one-time implementation adjustment to pay HHAs
for estimated costs associated with implementing the
revisions to the OASIS assessment schedules in order to
classify patients into the appropriate case-mix
categories for payment for the first year of PPS.

! Nonroutine Medical Supplies

The per-episode nonroutine medical supply amounts,
paid on a reasonable cost basis under a home health plan
of care, were calculated by summing the nonroutine
medical supply costs for all of the providers in the
audited cost report sample weighted to represent the
national population and updated to FY 2001. That total
was divided by the number of episodes for the providers
in the audited cost report sample weighted to represent
the national population and updated to FY 2001.

The per-episode possible unbundled nonroutine
medical supply amounts billed under Part B included in
the PPS rate were calculated by summing the allowed
charges for the revised 178 HCPCs codes (described in
sections II.B and IV.) in calendar year 1998 for
beneficiaries under a home health plan of care. That

total was divided by the total number of episodes in calendar year 1998 from the episode database.

! **Possible unbundled therapies billed to Part B that will be included under the PPS Rate**

As discussed in the response to comments and section III. of this regulation, prior to consolidated billing requirements governing PPS, HHAs may have been unbundled therapy services to Part B. Although this was a rare occurrence, we re-examined our approach to calculating the PPS rate. There is an additional therapy adjustment to the nonstandardized 60-day episode. For further detail, see section IV.B.3. The rate methodology is provided in Table 5 below.

! **Ongoing OASIS Cost Adjustments**

In the August 11, 1998 IPS Per-Visit and Per-Beneficiary Limitations notice (63 FR 42912) HCFA discussed a proposed adjustment for HHAs for the agency collection of the Outcome Assessment Information Set (OASIS) Data. Collecting and reporting OASIS is a condition of Medicare participation for HHAs. As we stated in the August 11, 1998 IPS notice, we believe there will be no permanent ongoing incremental costs associated with OASIS collection. Additionally, we believe that there will be no further one-time, start-up,

OASIS reporting costs beyond those recognized at the

inception of OASIS collection under IPS. However, we do

believe that ongoing costs are associated with reporting

OASIS data. Our proposed adjustment for the ongoing

costs associated with OASIS reporting is based on

information from the ongoing Medicare Quality and

Improvement Demonstration, as well as the OASIS

demonstration data. We assume, for purposes of deriving

the OASIS proposed adjustment, that the typical HHA has

486 admissions and 30,000 visits per year and an 18

person staff. OASIS reporting adjustments are unlike the

one-time OASIS collection adjustments published in the

August 11, 1998 **Federal Register** which were based only on

the number of skilled visits. These reporting

adjustments are based on total Medicare visits. The

following are HCFA's estimates of costs that a typical

HHA will incur for OASIS reporting which form the basis

of the per-visit OASIS reporting adjustment and the per-

episode OASIS adjustment. The first descriptive chart

below shows the base OASIS reporting costs for an HHA

which include the following: audits to ensure data

accuracy; data entry, editing and auditing; supplies; and

telephone costs. We estimate these ongoing OASIS costs

to total $.101228 per visit. The second descriptive

chart shows the OASIS personal computer costs for those
HHAs that are unable to run OASIS because they lack the
requisite hardware needed to support automation of the
assessment tool. We estimate this percentage to be 50
percent (64 FR 3759). These costs consist of the
depreciation of a personal computer and printer. For
years one through three, HHAs are able to depreciate both
their personal computer and printer. We estimate this
OASIS cost to be $.026778 per visit. For years four and
five, HHAs can only depreciate their printer. We
estimate this OASIS cost to be $.004 per visit. In order
for HHAs to keep pace with the ever evolving computing
standards, to include enhancements to computer hardware
and software, as well as future versions of Haven's OASIS
software, this process of the depreciation of computer
hardware is one that would repeat itself every five
years. Similarly, a yearly average computer hardware
depreciation adjustment was computed to yield an OASIS
adjustment for each of the five years. This was
accomplished by multiplying the first three years'
computer hardware depreciation adjustment of $.026778 by
3, multiplying the following two years' computer hardware
depreciation adjustment of $.004 by 2, summing those two
factors, and dividing that sum by the total number of

depreciable years (five), to get a yearly average for the computer hardware depreciation adjustment of $.017667. This yearly average for computer hardware depreciation adjustments ($.017667), when added to the base OASIS adjustment ($.101228), results in a total OASIS adjustment of $.118895 rounded to $.12 per visit.

For purposes of calculating the ongoing OASIS adjustment for the 60-day episode payment, we multiplied the average number of visits per 60-day episode (36 visits) by the total rounded per- visit OASIS adjustment ($.12 per visit). The calculation resulted in a per-episode OASIS adjustment of $4.32 for each 60- day episode under HHA PPS. The home health prospective payment calculation is provided in Table 5.

We calculated the ongoing OASIS adjustment for the low utilization payment adjustments by adding the total rounded per- visit OASIS adjustment ($.12 per visit) to the national standardized average cost per visit by discipline for each of the four or fewer visits provided in the episode. The low utilization payment adjustment calculation is provided in Table 6.

Continuous Oasis Adjustment: Base (for data reporting)

Type of Adjustment	Source	Formula	Cost per Visit
Audits to ensure data accuracy	University of Colorado (CHPR) BLS Occupational Employment Survey (1996) 1994 & 1995 HCFA Cost Report Data	(((((10 records per month * 12 months)) * .25 hrs) * $25.42) / 30,000 avg visits)...professional staff	$.02542

Data entry, editing, & auditing	University of Colorado(CHPR)
	
	Estimated average salary for clerical staff
	1994 & 1995 HCFA Cost Report Data
		((((8.5 hrs per month * 12) +
		  (5 hrs per month * 12) +
		  (1 hr per month * 12) +
		  (5 hrs per year))
		* $10 per hour) /
		30,000 avg visits)
			$.059667

Supplies	HCFA-3006-IFC OASIS Reporting (64 FR 3748) 1994 & 1995 HCFA Cost Report Data	$250 avg cost / 30,000 avg visits	$.008333
Ongoing telephone costs	Bell Atlantic 1994 & 1995 HCFA Cost Report Data (for average size HHA)	(((($13.14 per month, per line) + ($ 6.38 per month subscriber fee)) * 12 months) / 30,000 avg visits)	$.007808
TOTAL			$.101228

Continuous Oasis Adjustment: 5 year depreciation averaging (for data reporting)

Type of Adjustment	Source	Formula	Cost per Visit

Computer Hardware:
 	
  - Computer
 	
  - Printer
	American Hospital Association's.......
	Health Data & Coding Standards Group's
	"Estimated Useful Lives of Depreciable Hospital Assets" {revised 1998}
	
	Average cost for PC with minimal acceptable standards
	1994 & 1995 HCFA Cost Report Data
	
	Average cost for printer with minimal acceptable standards
	1994 & 1995 HCFA Cost Report Data
		$2050 computer depreciated over 3 years....
		($2050/3) / 30,000 avg visits
		
		$600 printer cost depreciated over 5 years...
		($600/5) / 30,000 avg visits
			$.022778
			
			$.004

	First 3 Year's Adjustment	***Note: computer & printer depreciation**	**$.026778**
	Next 2 Year's Adjustment	***Note: printer ONLY depreciation**	**$.004**
	5-Year Average Adjustment	**((($.026777 * 3) + ($.004 * 2)) / 5)**	**$.017667**

Personal Computer Minimal Specifications

Description	Minimal Specifications
Warranty	Minimum 3 year
Processor	Pentium II Processor running at 400 MHz w/512 Cache
Operating System	32-bit operating system with Graphical User Interface
Hard Drive	3 Gb Hard drive minimum
Memory	32 MB minimum
CD ROM	14-32 X, IDE, integrated sound
Floppy Drive	3.5" 1.44 MB diskette drive
Fax Modem	56K v.90 Data/Fax
Monitor	17" Color Monitor
Graphics	MB AGP
Mouse	Wheel mouse
Keyboard	104 key ergonomic keyboard
Anti Virus	Anti Virus Software
Management Software	System management client software/license
Printer	600 dpi Laser printer with cable

Oasis Adjustment: "One-Time" (for data reporting)

Type of Adjustment	Source	Formula	Cost per Visit
Training of Data Entry Staff	BLS Employer Provided Training (Hrs of Training 1995) & an estimated average salary for clerical personnel 1994 & 1995 HCFA Cost Report Data	(24 hrs * $10) / 30,000 avg visits	$.008

Telephone installation	Bell Atlantic	($28 processing fee)
		+
	Bell Atlantic	($40 per line connect fee)/ : visits
	1994 & 1995 HCFA Cost Report Data	
TOTAL One Time Adjustment		

❗ First Year of PPS One-Time Adjustment Reflecting Implementation Costs Associated with Revised OASIS Assessment Schedules needed to Classify Patients into Appropriate Case-Mix Categories for Payment

As set forth in the home health PPS proposed rule published in the **Federal Register** on October 28, 1999, (64 FR 58134) all data necessary to classify a patient to one of the 80 HHRG categories are contained in the OASIS-B supplemented, as applicable, by one additional item regarding projected therapy use in a given 60-day episode. Under PPS, HHAs are required to use the collection and reporting requirements for the OASIS data elements published in the **Federal Register** on January 25, 1999, supplemented by one additional therapy item as applicable. We set forth the proposed changes to the OASIS schedules in the home health PPS proposed rule. We also stated that we expect that the software programs, called grouper software, that use the OASIS-B supplemented by the projected therapy variable and assign patients to the appropriate groups, will be available

from many software vendors. The version we use will be

available at no cost from our HCFA website on PPS. We

proposed the option to build the grouper logic into the

HAVEN software, which is currently used for the

transmission of OASIS data for purposes of quality via

the State system.

As stated in the Interim Payment System Notice

published in the **Federal Register** on August 11, 1998, (63

FR 42912) we set forth the methodology for the one-time

offset adjustment for the implementation of the home

health OASIS. The one-time offset adjustment methodology

provided financial relief to HHAs for costs associated

with integrating the OASIS collection into their overall

approach to comprehensive assessment of patients. The

costs recognized in the one-time offset adjustment

methodology included three types of costs associated with

training staff, increases in assessment time during the

initial implementation, and staff to revise assessment

forms and integrate OASIS elements.

In response to commenters concern with costs

associated with implementing the OASIS-based case-mix

methodology, we believe there will be a modified one-time

adjustment for HHAs to implement the revised schedules

for the start of care and follow up assessments for PPS implementation. We are providing a refined methodology for the one-time adjustment for OASIS scheduling changes required by the case-mix adjustment methodology for the first year of PPS implementation. This is a one-time one year implementation adjustment. This methodology is a refined version of the offset adjustment set forth in the August 11, 1998 Interim Payment System Notice. The total offset adjustment described in the August 11, 1998 notice was applied by--

! First, multiplying the labor portion of the per-visit limitation for skilled nursing, physical therapy, speech language pathology, and occupational therapy by the factor of 1.003513 for training and forms revision;

! Secondly, adding the non-labor portion to the adjusted labor portion; and

! Thirdly, adding one cent for printing costs.

Under PPS, we are applying the same formula to the non-standardized average number and average cost per-visit amounts for episodes containing 5 or more visits for skilled nursing services, physical therapy services, speech-language pathology services, and occupational therapy services. That aggregate non-standardized amount

will then be adjusted by an OASIS scheduling adjustment factor.

As part of the formal OMB clearance process (see section VI. of this regulation for OMB approval number), we requested the following modifications to the current Version Start of Care/Resumption of Care Version Form HCFA-R245A approved 6/99, Follow-Up Version Form HCFA-R245B approved 6/99 for purposes of case-mix adjusting patients under home health PPS.

! **Modification to the Version Start of Care/Resumption of Care Version Form HCFA-R245A approved 6/99**

1) New Therapy Threshold Question discussed in the background section of this package.

MO825 Therapy Need: Does the care plan of the Medicare payment period for which this assessment will define a case-mix group indicate a need for therapy (physical, occupational, or speech therapy) that meets the threshold for a Medicare high-therapy case-mix group?

0-No

1-Yes

NA-not applicable

!　Modification to the Follow-Up Version Form HCFA-R245B approved 6/99

1) Must add the following already approved OASIS items to the Follow-Up schedule:

MO230 Home Care Diagnosis

M0240 Other Diagnosis

MO390 Vision

2) Must modify and add the current approved OASIS item MO170 regarding hospital discharge or nursing home care discharge within the past 14 days.

3) Must add the therapy threshold variable (M0825) to the Follow-Up OASIS Form and Schedule.

　We believe there will be a modified one-time adjustment for HHAs to implement the revised schedules for the start of care and follow up assessments as follows:

Visit by Discipline	Average Number of Visits (A)	Average Cost per Visit (B)	Aggregate Total ((A) * (B))
SK Nursing	14.08	$94.96	$1,337.04
PT	3.05	$104.05	$317.35
SPL	.18	$113.26	$20.39
OT	.53	$104.76	$55.52
Total			$1730.30

Approach:

1) Total = $ 1730.30

2) Labor Portion = 1730.30 X .77668= 1343.89

    Non-Labor Portion = 1730.30 X .22332 = 386.41

3) Adjusted Labor Portion = 1343.89 X 1.003513 = 1348.61

4) Adjusted Labor Portion 1348.61 + Non-Labor Portion

386.41 = 1735.02

5) .01 for printing + 1735.02 = $1735.03

6) 1735.03/80 (80 OASIS items) = $21.69

7) 21.69/4 (4 types of OASIS Schedules) = $5.42

8) We believe $5.42 reflects the cost for a new item

added to a new schedule. Therefore, $5.42 is the figure

used to reflect the need to add the new therapy variable

to Start of Care/Resumption of Care Assessment Schedules

to case-mix adjust the initial episodes as part of the

implementation adjustment to the 60-day non-standardized episode amount.

We must then add the cost of adding the new therapy variable to the Follow-Up Assessment Schedule as well as three already approved OASIS items. As set forth in the approach on the previous page, adding the new therapy variable to an assessment schedule is projected to cost $5.42 for the first year of implementation. In addition to the new therapy variable, three of the already approved OASIS items need to be added to the Follow-up OASIS. We estimated that adding a new item to the OASIS schedule would cost $5.42. We are applying an adjustment factor to that amount to account for the three additional already approved OASIS items to the Follow-Up Assessment schedule. We multiply the 5.42 for the new therapy variable by 3/80 (3 of the total 80 OASIS items). (We are applying a scheduling adjustment factor of 3/80 to the $5.42 amount to recognize that the three OASIS items are already approved and are only added to a new assessment schedule.) The Follow-Up Assessment schedule will now include the new therapy variable ($5.42)and the three already approved OASIS items ($5.42 * 3/80). The formula for the costs associated with the one-time first

year implementation of the Scheduling Changes to the

Follow-Up Assessment is as follows: $5.42 for the new

therapy variable plus an additional $0.20 ($ 5.42 X .0375

or (3/80)) = $5.62 per patient per Follow-Up assessment

used to case-mix adjust subsequent episodes for

continuing home health care.

The non-standardized 60-day episode amount for each

Start of Care 60-day episode will be adjusted to offset

the one-time implementation cost and burden associated

with the OASIS scheduling modifications required to

implement the case-mix methodology for the first year of

HHA PPS. The non-standardized 60-day episode amount for

each follow-up assessment used to case- mix adjust

subsequent episodes will also be adjusted. These

adjustments will be combined and reflected as

proportional adjustments.

Our research upon which we are basing the national PPS

rate indicates that about 60 percent of episodes are

completed within 60-days. We are using the following

approach to reflect the one time transition:

Start of Care Assessments used for initial episodes (.60

X $5.42) + Follow-Up Assessments used for subsequent

episodes (.40 X $5.62) = an adjustment of **$5.50** for each

non-standardized 60-day episode for the first year of
PPS.

The nonstandardized average prospective payment amount
must be then standardized to eliminate the effects of
case-mix and wage levels among HHAs. The standard
average prospective payment amount for the 60-day episode
equals the nonstandardized average prospective payment
amount for a 60-day episode divided by the
standardization factor. The standardization factor is
discussed in section IV.C.4 of this regulation. Once the
payment rate is standardized, that amount is multiplied
by the budget-neutrality factor. The budget-neutrality
factor is discussed in section IV.C.5 of this regulation.
The standardized budget-neutral amount is divided by 1.05
to account for outlier payments capped at 5 percent of
total estimated outlays under PPS.

The actual national 60-day episode payment amount that
will be paid to HHAs incorporates the standard average
prospective payment amount adjusted to account for case-
mix and wage index. All of the elements incorporated
into the national 60-day episode payment amounts (the
standard average prospective payment amount adjusted to
account for case-mix and wage index) must be budget

neutral to the interim payment system limitation amounts.
Table 5 illustrates the home health prospective payment
calculation.

TABLE 5--Home Health Prospective Payment Calculation

Home Health Discipline Type	Total Costs for all providers in the PPS audit sample (weighted, updated to FY 2001, and visit limit adjusted)	Total Visits for all providers in the PPS audit sample (weighted)	Average Cost per Visit from the PPS audit sample	Average number of visits for episodes with >4 visits from the CY 1998 Episode File	Home Health Prospective Payment Rate
Home Health Aide Services	5,915,395,602	141,682,907	$41.75	13.4	$559.45
Medical Social Services	458,571,353	2,985,588	$153.59	.32	$49.15
Occupational Therapy Services	444,691,130	4,244,901	$104.76	.53	$55.52
Physical Therapy Services	2,456,109,303	23,605,011	$104.05	3.05	$317.35
Skilled Nursing Services	12,108,884,714	127,515,950	$94.96	14.08	$1337.04
Speech Pathology Services	223,173,331	1,970,399	$113.26	.18	$20.39
Total Non Standardized Prospective Payment Amount Per 60-Day Episode For FY 2001					$2338.90
Average Cost per Episode for Non Routine Medical Supplies included in the home health benefit and reported as costs on the Cost Report					$43.54
Average Payment per Episode for Non Routine Medical Supplies possibly unbundled and billed separately to Part B					$6.08
Average Payment per Episode for Part B Therapies					$17.67
Average Payment per Episode for OASIS One Time Adjustment for form changes					$5.50
Average Payment per Episode for Ongoing OASIS Adjustment Costs					$4.32
Total Non Standardized Prospective Payment Amount Per 60-Day Episode For FY 2001 Plus Medical Supplies & Ongoing OASIS					$2,416.01

Total Non Standardized Prospective Payment Amount Per 60-Day Episode for FY 2001	Standardization Factor for Wage Index and Case-Mix /1	Budget Neutrality Factor /2	Outlier Adjustment Factor /3	Final Standardized and Budget Neutral Prospective Payment Amount Per 60-Day Episode for FY 2001
$2,416.01	.96184	.88423	1.05	$2115.30

1/ (Based on 100% episode wage indicies with therapy/nontherapy factors based on ABT data
2/ (Budget neutral to current IPS)
3/ (Adjustment to PPS rate to account for 5% of total payments to outlier episodes)

Calculation for Non Routine Medical Supplies Per Episode
Amount included in the Home Health Benefit

Non Routine Medical Supplies included in the home health benefit and reported as costs on the Cost Report [1]	Total number of episodes for those providers in the audited cost report sample [2]	Average Cost per Episode for Non Routine Medical Supplies included in the home health benefit and reported as costs on the Cost Report	Market Basket Update Factor to FY 2001 [3]	Average Cost per Episode for Non Routine Medical Supplies included in the home health benefit and reported as costs on the Cost Report
$234,547,615	5,733,010	$40.91	1.0643	$43.54

[1]Source: Audited Cost Report Data from the audit sample updated to FY 2001 and weighted to National Totals
[2]Source: Calendar Year 1998 Episode file
[3]Cumulative Market Basket Update Factor for years 1999 - 2001

Calculation for Non Routine Medical Supplies Possibly Unbundled and Billed under

Part B

Non Routine Medical Supplies possibly unbundled and billed separately to Part B and reimbursed on the Fee Schedule [1]	Total number of episodes for all providers in the calendar year 1998 file adjusted for estimated total episodes in FY 2001 [2]	Average Payment per Episode for Non Routine Medical Supplies possibly unbundled and billed separately to Part B	DME Fee Schedule Update to FY 2001[3]	Updated average Payment per Episode for Non Routine Medical Supplies possibly unbundled and billed separately to Part B
$37,526,132.26	6,170,887	$6.08	1.0	$6.08

[1]**Source: 1998 National Claims History Part B file extract for 178 codes matched to the 60-day episode file by beneficiary and dates of service**
[2]**Source: Calendar Year 1998 Episode file**
[3]**There exists no update to the DME Fee Schedule affecting Non Routine Medical Supplies for years 1999-2001**

Calculation for the Part B Therapies

Therapy services billed separately to Part B	Total number of episodes for all providers in the calendar year 1998 file adjusted for estimated total episodes in FY 2001 2/	Average Payment per Episode for Part B Therapies	Physician Fee Schedule Updates to FY 2001 3/	Updated Average Payment per Episode for Part B Therapies
$94,200,316.08	6,170,887	$15.27	1.157	$17.67

1/Source: 1998 National Claims History Part B extract file for 57 CPT therapy codes for Physician/Supplier claims and for the physical therapy, occupational therapy, and speech therapy revenue center codes matched to the 60 Day episode file by beneficiary and dates of service
2/Source: Calendar Year 1998 Episode file
3/Cumulative Update Factor for Part B Therapies based on Physician Fee Schedule Updates for years 1999 - 2001

Each component of the methodology is discussed below.

1. Cost Data--60-Day Episode Payment

The audited cost data is discussed above in detail in section IV. of this regulation. The data source used in developing the national mean cost per visit for a 60-day episode is the audited cost report sample database. We calculated the national mean cost per visit for each of the six disciplines (skilled nursing, physical therapy, occupational therapy, speech-language pathology services, medical social services, and home health aide services) used in a 60-day episode. The data source in developing the average cost per episode for nonroutine medical

supplies paid on a reasonable-cost basis under a home health plan of care is the audited cost report sample database also discussed in section III. this regulation.

2. Utilization Data--60-Day Episode Payment

As discussed above, developing the national mean number of visits for each of the six disciplines in a 60-day episode resulted from the thorough analysis of the national claims history.

3. Updating the Data

The HHA market basket index reflects changes over time in the prices of an appropriate mix of goods and services included in covered HHA services. The HHA market basket index is used to develop the national 60-day episode payment rates. The data used to develop the HHA PPS rates were adjusted using the latest available market basket increases occurring between the cost reporting periods contained in our database and September 30, 2001. For each of fiscal years 2002 and 2003, section 1895 (b)(3)(B)(ii) of the Act requires the standard prospective payment amounts be increased by a factor equal to the home health market basket minus 1.1 percentage points. In addition, for any subsequent fiscal years, the statute further requires the rates to

be increased by the applicable home health market basket
index change. A complete discussion concerning the
design and application of the HHA market basket index and
the factors used in developing the 60-day episode payment
rates is discussed in section IV.B.2. of the regulation.

4. Standardization Factor

Section 1895(b)(3)(A)(i) of the Act requires that the
prospective payment amounts be standardized to eliminate
the effects of variation in wage levels and case-mix
among HHAs. The objective of standardization is to
ensure that the wage-index and case-mix adjustments to
the episode payment amount do not alter the aggregate
payments that would occur in the absence of these
adjustments. All the estimates described in this section
are based on episodes with more than four visits since
only those episodes will be paid on a per-episode basis.

Several types of information are required for
standardization. To account for wage differences, the
proportion of labor and nonlabor components of HHA costs
must be identified. These proportions are based on the
relative importance of the different components of the
HHA market basket index. As calculated, the labor-
related portion of cost is 77 percent and the nonlabor-

related portion is 23 percent. Wage differences are

measured using the hospital wage index. In standardizing

the episode payment amount, we used the pre-floor and

pre-reclassified FY 2000 hospital wage index, which is

based on FY 1996 hospital wage data. For application of

the wage index, the statute allows us to use the service

area or any other area we specify. As noted in the

proposed rule, to be consistent with the current interim

payment system, the wage index value that will be applied

to the labor portion of the episode amount will be the

appropriate wage index for the geographic area where the

beneficiary received home health services. The best

source of data on wage-index variation among 60-day

episodes that was available for standardization was the

episode data set that we constructed from 1998 Medicare

home health claims.

To account for case-mix differences, it is necessary to

have information on the distribution of 60-day home

health episodes among the 80 groups of the HHRG case-mix

system. For this final rule, we were able to examine

more data on case-mix variation than was available for

the proposed rule. For the proposed rule, the only

available data on episodes classified by HHRG was the Abt

data set that was used to develop the HHRG case-mix

classification system. For the final rule, we had access

to an updated (and larger) Abt data set, early data from

the OASIS national repository, and the 1998 episode file

constructed from Medicare claims to which we were able to

assign average therapy and non-therapy HHRG weights.

We first compared the Abt data to the data from the

OASIS national repository. We compared the distributions

of the responses to the OASIS items used in constructing

the HHRGs. In addition, we compared the distributions of

the HHRGs for both of these data sets. This comparison

had to be made using only 40 of the 80 HHRGs as therapy

assignments could not be made from the national OASIS

data. (Time lags in the receipt of claims for episodes

corresponding to the OASIS from the national repository

prevented us from making therapy assignments for the

national OASIS data.) Despite this limitation, the

comparisons we were able to make showed a high degree of

similarity between the two data sources and increased our

confidence that the Abt data set is representative of

national case-mix variation.

We next compared the Abt data to the 1998 episode data

set derived from Medicare claims. In particular, we

compared the distributions of estimated cost for the two
data sets. Cost was estimated by multiplying the
national per-visit costs for each discipline by the
number of visits in each discipline and summing the
total. Cost distributions were constructed for the Abt
data using both samples, with and without applying the
population weights described in the proposed rule. We
found that the cost distribution of the unweighted Abt
data matched the 1998 episode data much more closely than
did the weighted Abt data. From this analysis, we
concluded that the unweighted Abt data provided a good
basis for comparison of standardization factors.

To make full use of the available data, we developed
the following strategy for standardizing the episode
amount:

! First, we estimated three standardization factors
using the Abt data set. The first one accounts only for
variation in wage index values; the second accounts for
wage index and case-mix variation, using all 80 HHRGs;
the third accounts for wage index and case-mix variation,
using HHRG weights collapsed to therapy and non-therapy
averages. All three Abt standardization factors are very
similar: .97510, .97945, and .97888, respectively.

❗ Then, we estimated two standardization factors using the 1998 national claims episode data: a wage-only factor and a wage and two case-mix groups factor. The wage-only standardization factor was .95808, compared to .97510 for the corresponding factor using the Abt data. The wage index and two case-mix groups standardization factor was .96183, compared to .97887 for the corresponding factor from the Abt data.

For several reasons, we decided to use the wage index and two case-mix groups factor from the 1998 national claims data as the final standardization factor for this rule.

❗ First, the national claims data provides the most reliable estimate of the effects of wage index variation;

❗ Second, there was hardly any difference in the wage and case-mix standardization factors based on the Abt data using either 80 HHRGs or the collapsed two-groups;

❗ Third, overall there was a high degree of similarity of values obtained from all of the various methods.

Each of the estimates of the standardization factor was calculated in the following manner:

❗ For each episode (or in the case of the Abt data, the number of episodes represented by each sample

episode), the appropriate wage index value was multiplied
by the labor-related proportion of cost (.77668) and
added to the nonlabor-related proportion (.22332) to
obtain a wage-adjustment factor;

! In turn, the wage-adjustment factor was multiplied
by the HHRG relative weight;

! The product of the wage and case-mix factors was
summed over all episodes in the database, yielding a
case-mix and wage-adjusted episode sum;

! Dividing the case-mix and wage-adjusted episode sum
by the total number of episodes (the unadjusted episode
sum) yields the standardization factor, a ratio that
indicates how the combined effects of wage and case-mix
variation impact aggregate payments;

! If the standardization factor is greater than one,
the unstandardized episode cost must be reduced to
account for the aggregate payment effect of the case-mix
and wage index payment adjustments;

! If the factor is less than one, then the
unstandardized episode cost must be increased to
accomplish the same objective. The standardized episode
amount is equal to the unstandardized episode cost
divided by the standardization factor. Note that all

three of our estimates were less than one, which implies
that the standardization factor increases the standard
episode amount. Our final standardization factor
produces an increase of about 4.7 percent.

5. Budget-Neutrality Factor

   To determine the budget neutrality adjustment, we use
our most current estimate of incurred costs for home
health expenditures in FY 2001 under the interim payment
system (IPS). Under the President's FY 2001 Budget
assumptions, we are projecting this amount to be $11,273
million. This amount includes the medical supplies which
were billed separately under IPS but will be bundled
under PPS. Our best estimate of what would be spent in
FY 2001 on Part B therapies not currently included in the
home health benefit but which will be covered by the
benefit under PPS is $109 million. We did not include
this in the home health spending for the FY 2001 budget
because we had not yet determined it needed to be added
to the spending target. We are adding $109 million to
the $11,273 million to determine the total spending
target for home health PPS spending, $11,382 million. We
are estimating that there would have been 137,271,000

visits incurred in FY 2001. The following table outlines the variables used to determine the adjustment:

Period (1)	Visits (2)	Visits/per Episode (3)	Number of Episodes (4)
CY 1997	280,569,000	30.99	9,054,000
CY 1998	163,208,000	26.88	6,072,000
FY 2001	137,271,000		

Column (2) represents the actuaries' best estimate of the number of visits incurred in each of the time periods. These numbers differ from the number of visits in the episode files. The episode files were created to analyze visits per episode and were not meant to be the basis for the actual number of visits incurred in calendar years 1997 and 1998.

   Column (3) was determined from the episode files we had created. Column (4) was determined by dividing Column (2) by Column (3) and rounding to the nearest thousand. From these numbers we need to determine the number of visits per episodes we would have if we had an episode file created for 2001. This would then allow us to determine the number of episodes there will be in 2001.

From the table, we can see that the number of visits
declined by about 42 percent from CY 1997 to CY 1998.
The episode file analysis showed that one-third of this
decline was due to a decline in the number of visits per
episode. Between CY 1998 and FY 2001, we are projecting
a further 16 percent decline in the number of visits. We
are assuming that one-third of this decline will be
attributable to the decline in the number of visits per
episode. This results in number of visits per episode of
25.5. Dividing 137,271,000 visits by 25.5 results in
5,383,000 episodes. This would be the number of expected
episodes if episodes were not all starting on October 1,
2001. Because all patients being served at the beginning
of the fiscal year will be starting a new episode on
October 1, we will be making more episode payments in
that first year. We will be paying for an increased
number of episodes in FY 2001 compared to what would have
been paid if patients entered PPS only after their
current period of home health care ended. To account for
this first-year anomaly, we increased the number of
episodes by 3.66 percent over the 5,383,000 determined
above. This results in a projected number of episodes of
5,580,000 incurred in FY 2001. In fiscal years 2002 and

later we will be adding $79 to the episode payment since this anomaly will no longer exist in those years.

These 5,580,000 episodes need to be split into full episodes and LUPA episodes since our current number of projected visits includes both. We estimate that 5 percent of episodes will be ones with four or fewer visits. Therefore, 95 percent will receive a full episode payment. The 1998 episode file showed that 16 percent of episodes would have received a LUPA payment. Of this 16 percent, only 26 percent or 4 percent of the total were cases where only 1 to 4 visits were provided in a single 60-day, non-contiguous period. These cases would clearly receive LUPA payments under PPS. Twelve percent of total episodes have less than five visits but were episodes which fell at the end of a series of prior episodes. Under a plan of care established for PPS these "episode end" visits may not exist. Because of the nature of how the episode file created LUPA episodes, we feel that LUPA payments will make up a smaller portion of payments than was shown in the episode file. The determination of this adjustment factor to the episode payment is as follows:

Number of LUPA Episodes	Average LUPA Payment	Number of Full Episodes (non-LUPA)	Average Full Episode (non-LUPA) Payment
5,580,000 X .05=279,000	$205.20	5,580,000x.95=5,301,000	$2,416.01

	LUPA	Full Episode
Projected Payments Before Neutrality	(279,000 x $205.20) +	(5,301,000 x $2,416.01)
	= $57.25 million	= $12,807 million

Projected Incurred Spending in FY 2001: $11,382 million
Budget Neutrality Adjustment Factor = (11,382-57.25)/ 12,807 = 0.88423

After applying this adjustment to the full episode payments, we expect to have the following incurred payments in FY 2001: $57.25 million for LUPA payments plus 5,301 x $2,416.01 x .88423= $11,325 million in full episode payments, totaling $11,382 million.

D. Methodology Used for Low-Utilization Payments

As discussed above, section 1895(b)(1) of the Act requires the development of the definition of the unit of payment or episode to take into consideration the number, type, duration, mix, and cost of visits provided within the unit of payment. As a result of our analysis, we determined the need to also recognize a low-utilization payment under HHA PPS. Low-utilization payment would reduce the 60-day episode payments, PEP adjustment or the

SCIC adjustment to those HHAs that provide minimal

services to patients during a 60-day episode.

Payments for low-utilization episodes will be made on a

per-visit basis using the cost per-visit rates by

discipline determined from the audited cost report sample

for calculation of the standard episode amount. Included

in these per-visit amounts are amounts for (1) nonroutine

medical supplies paid under a home health plan of care,

(2) nonroutine medical supples possibly unbundled to Part

B, (3) a per-visit ongoing OASIS reporting adjustment as

discussed above, and (4) a one-time one year adjustment

reflecting costs associated with OASIS assessment

schedule refinements needed to implement the case-mix

methodology in section IV.G. of this regulation. We did

not add a per-visit rate adjustment for therapies

possibly unbundled to Part B as we did for the per-

episode payments. Based on the analysis of the Part B

therapy date, we found that blending the higher and lower

therapy per-visit amounts creates an anomalous result.

We know the per-visit amounts provided in Table 6 are

appropriate. These per-visit "prices" would be updated

in the same manner as the standard episode amount.

However, as discussed in the responses to comment

section, we have revised our approach to the calculation

of the amount paid for each visit price per discipline.

We are retaining the four or fewer visit threshold for

the LUPA, but are increasing the proposed amount by using

the standardized wage adjusted national average cost per

visit by discipline amounts updated by the market basket

to FY 2001. See the response to comment in section III.

of this rule for further clarification.

   For low-utilization payments, they would be adjusted by

the wage index in the same manner as the standard episode

amount. However, the low-utilization payments are not

case-mix adjusted. The standardization factor used to

adjust the LUPAs was calculated using national claims

data for episodes containing four or fewer visits. This

standardization factor includes adjustments only for the

wage index. The "savings" from the reduced episode

payments would be redistributed to all episodes.

   Below is Table 6 which presents the home health low-

utilization provider adjustment payment calculation.

Table 6--Home Health Low-utilization Provider Adjustment Payment Calculation

Home Health Discipline Type	Average Cost per Visit from the PPS audit sample	Average Cost per visit for Non Routine Medical Supplies reported as costs on the Cost Report	Average Cost per visit for Non Routine Medical Supplies possibly unbundled and billed separately to Part B and reimbursed on the Fee Schedule	Average cost per visit for Ongoing OASIS Adjustment Costs 3/	Ave Cost per visit for one-time OASIS Scheduling Implementation change	Standardization Factor for Wage Index /1	Outlier Adjustment Factor 2/	Final Wage Standardized Per Visit Payment Amounts Per 60-Day Episode For FY 2001
Home Health Aide Services	$41.75	$1.71	$0.23	$0.12	$.21	.96674	1.05	$43.37
Medical Social Services	$153.59	$1.71	$0.23	$0.12	$.21	.96674	1.05	$153.55
Occupational Therapy. Services	$104.76	$1.71	$0.23	$0.12	$.21	.96674	1.05	$105.44
Physical Therapy Services	$104.05	$1.71	$0.23	$0.12	$.21	.96674	1.05	$104.74
Skilled Nursing Services	$94.96	$1.71	$0.23	$0.12	$.21	.96674	1.05	$95.79
Speech Pathology Services	$113.26	$1.71	$0.23	$0.12	$.21	.96674	1.05	$113.81

/1 (Based on 100% episode for episodes with 4 or fewer visits and wage index only standardization factor)

/2 (Adjustment to PPS rate to account for 5% of total payments to outlier episodes)

/3 (See Section II.A.3 for description of calculation of OASIS Adjustment cost)

Calculation for Non Routine Medical Supplies Per-Visit Amount included

in the Home Health Benefit

Non Routine Medical Supplies included in the home health benefit and reported as costs on the Cost Report [1]	Total number of visits for those providers in the audited cost report sample [2]	Average Cost per Visit for Non Routine Medical Supplies included in the home health benefit and reported as costs on the Cost Report	Market Basket Update Factor to FY 2001 [3]	Updated Average Cost per Visit for Non Routine Medical Supplies included in the home health benefit and reported as costs on the Cost Report
$234,547,615	145,658,396	$1.61	1.0643	$1.71

[1] Source: Audited Cost Report Data from the audit sample updated to FY 2001 and weighted to National Totals
[2] Source: Calendar Year 1998 Episode file
[3] Cumulative Market Basked Update Factor for years 1999 - 2001

Calculation for Non Routine Medical Supplies Per-Visit

Amount Possibly Unbundled and Billed Under Part B

Non Routine Medical Supplies possibly unbundled and billed separately to Part B and reimbursed on the Fee Schedule [1]	Total number of visits for all providers in the calendar year 1998 file [2]	Average Payment per visits for Non Routine Medical Supplies possibly unbundled and billed separately to Part B	DME Fee Schedule Update to FY 2001 [3]	Updated Average Payment per visits for Non Routine Medical Supplies possibly unbundled and billed separately to Part B
$37,526,132.26	163,208,000	$0.23	1.0	$0.23

[1] Source: 1998 National Claims History Part B file extract for 178 codes matched to the 60-day episode file by beneficiary and dates of service
[2] Source: Calendar Year 1998 Episode file
[3] There exists no update to the DME Fee Schedule affecting Non Routine Medical Supplies for years 1999 -2001

Calculation for One-Time OASIS Scheduling Implementation for Form Changes

Total Cost for OASIS Scheduling implementation Change [1]	Total number of visits for all providers in the calendar year 1998 file [2]	Average Payment per visits for Part B Therapies possibly unbundled and billed separately to Part B Physician/Supplier
$33,939,878.50	163,208,000	$0.21

[1] Episode Rate for OASIS Scheduling Implementation Change ($5.50) / the total number of episodes in 1998 (6,170,887)

[2] Calendar year 1998 Episode File

E.   Methodology Used for Outlier Payments

   As discussed above, while we are not statutorily required to make provisions for outlier payments, we are establishing outlier payments. Outlier payments are payments made in addition to regular 60-day case-mix-adjusted episode payments for episodes that incur unusually large costs due to patient home health care needs. Outlier payments are made for episodes whose estimated cost exceeds a threshold amount for each HHRG. The outlier threshold for each HHRG is defined as the 60-day episode payment for the HHRG plus a fixed dollar loss amount that is the same for all case-mix groups. Outlier

payments are made for 60-day episode payments that

reflect a PEP adjustment or SCIC adjustment. The PEP

adjustment results in a truncated episode period and a

SCIC adjustment results in a total of the proportional

payments over a 60-day episode, but these periods could

still incur unusually large costs. The outlier threshold

for the PEP adjustment is the PEP adjustment plus the

fixed dollar loss. The outlier threshold for the SCIC

adjustment equals the total SCIC payment plus a fixed

dollar loss. The wage adjusted component discussed below

will be applied consistently for the 60-day episode

payment, the PEP adjustment, and the total SCIC

adjustment. The outlier payment is defined to be a

proportion of the wage adjusted estimated costs beyond

the wage adjusted threshold. The threshold amount is the

sum of the wage and case-mix adjusted PPS episode amount

and the wage-adjusted fixed dollar loss amount. The

proportion of additional costs paid as outlier payments

is referred to as the loss-sharing ratio.

The fixed dollar loss amount and the loss-sharing

ratio are chosen so that estimated total outlier payments

are 5 percent of total episode payments. The 5 percent

constraint on total outlier payments creates a tradeoff

between the values selected for the fixed dollar loss

amount and the loss-sharing ratio. For a given level of

outlier payments, a higher fixed dollar loss amount

reduces the number of cases that receive outlier

payments, but makes it possible to select a higher loss-

sharing ratio and, therefore, increase outlier payments

per episode. Alternatively, a lower fixed dollar loss

amount means that more episodes qualify for outlier

payments, but outlier payments per episode must be lower.

Therefore, setting these two parameters involves policy

choices about the number of outlier cases and their rate

of payment.

We initially proposed a loss sharing ratio of .60 and a

fixed dollar loss of 1.07 times the national standard

episode payment amount. For the proposed rule, we

estimated that with these variables, 7.5 percent of total

episodes would have qualified for an outlier payment

while holding total outlier outlays at 5 percent of

outlays in a given fiscal year. In response to comments,

we are increasing the loss sharing ratio from 0.60 to

0.80 to provide greater compensation for the episodes

that qualify for outlier payments. We believe that this

change is appropriate and will continue to monitor the impacts of the outlier policy under PPS implementation.

The simulations conducted for the proposed rule found that a loss sharing ratio of 0.80 would require a fixed dollar loss ratio of 1.35. We have rerun these simulations using the expanded and updated Abt data and are making some refinements in our simulation methods.

The new simulations also reflect the refinements for wound cases that have been incorporated into the case-mix system. The results of the new simulations indicate that a fixed dollar loss ratio of **1.13** is consistent with a loss sharing ratio of **0.80.** With these parameters, we estimate that about 6.8 percent of episodes would qualify for outlier payments with total outlier outlays equal to the required 5 percent.

In estimating the final outlier policy parameters, we examined OASIS data from the national repository, an episode data set created from 1998 Medicare home health claims, and an updated and expanded data set from the Abt case-mix study. As noted in our discussion of standardization, we compared the OASIS and the Abt data in terms of the responses to the 18 OASIS items used for case-mix classification and in terms of the distribution

of episodes across the HHRGs. We also compared the Abt
and the 1998 episode data and found that the estimated
cost distribution based on the pattern of visits within
episodes was very similar in both sets of data. These
comparisons increased our confidence in using the Abt
data to simulate the outlier policy parameters. In
addition, the Abt data is the most complete data
currently available for estimating outlier policy
variables. It contains information on all 80 HHRGs and a
measure of resource cost for each episode. The Abt data
set used for the final outlier policy is about 15 percent
larger than the data set that was used for the estimates
in the proposed rule.

   The fixed dollar loss estimate was based on simulations
that calculated PPS payments and costs for each episode
in the data set. Payments were calculated twice, once
for a PPS without outlier payments and again for a PPS
with outlier payments. For the payment system with
outlier payments, the LUPA and episode payment amounts
were deflated by 1.05. Using a loss sharing ratio of
0.80, the simulation was repeated until a fixed dollar
loss ratio was found that resulted in (1) equal total
payments for the PPS with and without outlier payments,

and (2) total outlier payments equal to 5 percent of total payments, including outlier payments. In addition, payment amounts were set to equate total payments and total costs. Because the Abt data does not represent all wage areas of the country, the simulations did not apply the wage index adjustments that will be applied to actual outlier payments. It was not possible to account for PEP or SCIC adjustments in the simulations.

Simulations were performed to obtain the most reasonable estimates possible of the fixed dollar loss ratio consistent with the 5 percent outlier payment target. Based on the experience of the Phase II per-episode prospective payment demonstration and the interim payment system, we were concerned that agencies may reduce utilization for high-cost episodes in response to the budget neutral episode payment rate. If our simulations failed to account for such reductions, the simulations might overestimate agencies' losses and lead us to set the fixed dollar loss amount higher than necessary to meet the 5 percent target. We incorporated estimates of cost reduction into our simulations that resulted in a lower fixed dollar loss ratio lower than would have been chosen otherwise. In general, we assumed

that any reduction in payment rates below the level of the mean cost would be matched by a cost reduction of equal percentage.

Simulations were also performed to test the sensitivity of the fixed dollar loss to alternative proportions of LUPA episodes. LUPAs can affect the fixed dollar loss ratio consistent with a 0.8 loss sharing ratio. Because they are paid much less than regular episodes, substantial differences in their frequency can affect estimated total payments. Due to the asymmetric impacts on outlier and total payments, variations in the frequency of LUPAs could potentially lead to either overestimation or underestimation of the 5 percent outlier target.

LUPAs comprise 11.6 percent of the episodes in the Abt data used for the outlier simulations. Given the incentives under the PPS to obtain the 60-day episode payment rather than the LUPA payment, we believe that 11.6 percent overestimates the frequency of LUPAs that are likely to occur under PPS. As a result, we simulated the outlier policy under alternative percentage of LUPA episodes.

It is also worth noting that the case-mix refinements for wound cases improved regular episode payments and reduced the need for outlier payments for these cases.

The following is a case for illustrative purposes only. An HHA serves a Medicare beneficiary in State College PA. The HHA determines the patient is in HHRG C2F2S2. The patient had physician orders for and received 55 skilled nursing visits and 40 home health aide visits during the 60-day episode.

1. Calculation of the Wage-Adjusted Outlier Threshold

The Wage-Adjusted Outlier Threshold Amount is the sum of the Wage and Case-Mix

Adjusted 60-Day Episode Amount and the Wage-Adjusted Fixed Dollar Loss Amount.

a. Calculate Case-Mix and Wage-Adjusted Episode = $3,855.31

Case-Mix Weight = 1.9532

Standard 60-Day Prospective Episode Payment Amount= $2,115.30

Calculate the Case-Mix Adjusted Episode Payment

Multiply the Standard 60-Day Prospective Episode Payment Amount by the Applicable Case-

Mix Weight = (1.9532 * $2,115.30)

= $4,131.60

Divide the Case-Mix Adjusted Episode Payment into the Labor and Non-Labor Portions

Labor Portion = (.77668 * $4131.60) = $3,208.93

Wage-Adjust the Labor Portion by Multiplying the Labor Portion by the Wage Index Factor

(.9139 * $3,208.93) = $2,932.64

Calculate Non-Labor Portion = (.22332 * $4,131.60) = $922.67

Add Wage-Adjusted Labor Portion to Non-Labor Portion to Calculate the Total Case-Mix

and Wage-Adjusted Episode Payment = (2,932.64 + $922.67) = $3,855.31

b. Calculate Wage-Adjusted Fixed Dollar Loss Amount = $2,230.45

Fixed Dollar Loss Amount = Standard 60-Day Episode Payment Multiplied by 1.13

($2115.30 * 1.13) = $2,390.29

Divide Fixed Dollar Loss Amount into Labor and Non Labor Portions:

Calculate Labor Portion of Fixed Dollar Loss Amount = (.77668 * $2,390.29) = $1,856.49

Wage Adjust the Labor Portion by Multiplying the Labor Portion of the Fixed Dollar Loss by

Multiplying the Labor Portion of the Fixed Dollar Loss Amount by the Wage Index (.9139 *

$1,856.49) = $1,696.65

Calculate Non-Labor Portion of Fixed Dollar Loss Amount = (.22332 * $2,390.29) =

$533.80

Calculate Total Wage Adjusted Fixed Dollar Loss Amount by adding the wage adjusted

portion of the fixed dollar loss amount to the non labor portion of the fixed dollar loss amount

($1,696.65 + $533.80) = $2,230.45

Wage-Adjusted Outlier Threshold =Case-Mix and Wage-Adjusted Episode Amount

+ Wage Adjusted Fixed Dollar Loss Amount

= ($3,855.31 + $2,230.45)

= $6,085.76

2. Calculate the Wage-Adjusted Imputed Cost of the Episode

Multiply the total number of visits by the national average per-visit amounts listed in Table 6.

55 skilled nursing visits * $95.79 (national average per skilled nursing visit cost) = $5,268.45

40 home health aide visits * $43.37 (national average per home health aide visit cost) = $1,734.80

Calculate the wage-adjusted labor and non-labor portions for the imputed skilled nursing visit costs

Labor Portion= ($5,268.45* .77668) = $4,091.90

Adjust the labor portion by the wage index

Wage Adjusted Skilled Nursing Labor Portion = ($4,091.90 * .9139) = $3,739.59

Wage Adjusted Skilled Nursing Labor Portion = $3,739.59

Calculate the Skilled Nursing Non-Labor Portion

Non-Labor Portion = ($5,268.45 * .22332) = $1,176.55

Non-Labor Skilled Nursing Portion = $1,176.55

Total Wage Adjusted Imputed Costs for Skilled Nursing Visits = $4,916.14

(Wage Adjusted Skilled Nursing Labor Portion of $3,739.59 + Non-Labor Skilled

Nursing Portion of $1,176.55) = $ 4,916.14

Calculate the wage adjusted labor and non-labor portions for the imputed home health aide visit costs

Labor Portion= ($1,734.80* .77668) = $1,347.38

Adjust the labor portion by the wage index

Wage Adjusted Home Health Aide Labor Portion = ($1,347.38 * .9139) = $1,231.37

Wage Adjusted Home Health Aide Labor Portion = $1,231.37

Calculate the Home Health Aide Non-Labor Portion

Non-Labor Portion = ($1,734.80 * .22332) = $387.42

Non-Labor Home Health Aide Portion = $387.42

Total Wage Adjusted Imputed Costs for Home Health Aide Visits = $1,618.79

(Wage Adjusted Home Health Aide Labor Portion of $1,231.37 + Non-Labor Home

Health Aide Portion of $387.42) = $ 1,618.79

Total Wage Adjusted Imputed Costs for Skilled Nursing and Home Health Visits

During the 60 Day Episode = ($4,916.14 + $1,618.79) = $ 6,534.93

3. Calculate the Amount Absorbed by the HHA in Excess of the Outlier Threshold

Subtract the Outlier Threshold from the Total Wage Adjusted Imputed Per-Visit Costs for the

Episode

$6534.93 (Total Imputed Wage Adjusted Per-Visit Costs) - **$6,085.76** (Outlier Threshold) =

$449.17

Imputed Amount in Excess of the Outlier Threshold = $449.17

4. Calculate Outlier Payment by Multiplying the Imputed Amount in Excess of the Outlier

Threshold Absorbed by the HHA By the Loss Sharing Ratio (80%)

($449.17 (Imputed Amount in Excess of the Outlier Threshold Absorbed by the HHA *

.80 (Risk Sharing Ratio) = $359.34

Outlier Payment = $359.34

The HHA in this illustrative example would receive the total case-mix and wage

adjusted 60-day episode payment of $3,855.31 plus the additional outlier payment of

$359.34

Total Payment (Episode & Outlier Payment) = ($3,855.31 + 359.34) = $4,214.65

F. Examples of National Standardized 60-Day Episode Payment Amounts and Low-Utilization Payment Adjustments

For any HHRG group, to compute a case-mix and wage-adjusted 60-day episode prospective payment amount, the standardized prospective payment rate for FY 2001 (see Table 5 of this regulation) is multiplied by the case-mix index from Table 9 for that HHRG group. To compute a wage-adjusted national 60-day episode payment, the labor-related portion of the 60-day national prospective payment rate for FY 2001 is multiplied by the HHA's appropriate wage index factor listed in Table 4A or 4B. The product of that calculation is added to the corresponding nonlabor-related component. The resulting amount is the national case-mix and wage-adjusted 60-day episode prospective payment rate for FY 2001.

Example 1. An HHA is providing services to a Medicare beneficiary in State College, PA. The HHA determines the beneficiary is in HHRG C2F2S2.

COMPUTATION OF CASE-MIX AND WAGE ADJUSTED PROSPECTIVE PAYMENT AMOUNT		
Case-mix index from Table 9 for case-mix group		1.9532
Standardized Prospective Payment Rate for FY 2001		$2,115.30
Calculate the Case-Mix adjusted Prospective Payment Rate for FY 2001	(1.9532 * $2,115.30)	$4,131.60
Calculate the Labor portion of the Prospective Payment Rate for FY 2001	(.77668 * $ 4,131.60)	$3,208.93

COMPUTATION OF CASE-MIX AND WAGE ADJUSTED PROSPECTIVE PAYMENT AMOUNT	
Apply wage index factor from Table 4B for patient in State College, PA (0.9139 * $ 3,208.93)	$2,932.64
Calculate the Non- Labor portion of the Prospective Payment Rate for FY 2001 (.22332 * $4,131.60)	$922.67
Calculate Total Prospective Payment Rate for FY 2001 by adding the labor and non labor portion of the case-mix and wage index amounts ($2,932.64 + $922.67)	$3,855.31

Example 2. An HHA serves a beneficiary who resides in
Lake Placid, NY. The HHA determines the patient is in
HHRG C1F4S3.

COMPUTATION OF CASE-MIX AND WAGE ADJUSTED PROSPECTIVE PAYMENT AMOUNT	
Case-mix index from Table 9 for case-mix group	2.2360
Standardized Prospective Payment Rate for FY 2001	$2,115.30
Calculate the Case-Mix adjusted Prospective Payment Rate for FY 2001 (2.2360 * $2,115.30)	$4,729.81
Calculate the Labor portion of the Prospective Payment Rate for FY 2001 (.77668 * $4,729.81)	$3,673.55
Apply wage index factor from Table 4A for patient in Lake Placid, NY (0.8637 * $3,673.55)	$3,172.85
Calculate the Nonlabor portion of the Prospective Payment Rate for FY 2001 (.22332 * $4,729.81)	$1,056.26
Calculate Total Prospective Payment Rate for FY 2001 by adding the labor and nonlabor portion of the case-mix and wage index amounts ($3,172.85 + $ 1,056.26)	$4,229.11

Example 3. HHA serves a beneficiary who resides in Fort
Collins, CO. The HHA determines the beneficiary is in
HHRG C3F0S0.

COMPUTATION OF CASE-MIX AND WAGE-ADJUSTED PROSPECTIVE PAYMENT AMOUNT	
Case-mix index from Table 9 for case-mix group	1.1973
Standardized Prospective Payment Rate for FY 2001	$2,115.30
Calculate the Case-Mix adjusted Prospective Payment Rate for FY 2001 (1.1973 * $ 2,115.30)	$2,532.65
Calculate the Labor portion of the Prospective Payment Rate for FY 2001 (.77668 * $2,532.65)	$1,967.06
Apply wage index factor from Table 4B for patient in Fort Collins, CO (1.0303 * $1,967.06)	$2,026.66
Calculate the Non- Labor portion of the Prospective Payment Rate for FY 2001(.22332 * $2,532.65)	$565.59
Calculate Total Prospective Payment Rate for FY 2001 by adding the labor and non labor portion of the case-mix and wage index amounts ($2,026.66 + $ 565.59)	$2,592.25

Example 4. HHA serves a beneficiary who resides in Grand

Forks, ND. The HHA determines the beneficiary is in HHRG

C0F3S1.

COMPUTATION OF CASE-MIX AND WAGE-ADJUSTED PROSPECTIVE PAYMENT AMOUNT	
Case-mix index from Table 9 for case-mix group	.8438
Standardized Prospective Payment Rate for FY 2001	$2,115.30
Calculate the Case-Mix adjusted Prospective Payment Rate for FY 2001 (.8438* $2,115.30)	$1,784.89
Calculate the Labor portion of the Prospective Payment Rate for FY 2001 (.77668 * $1,784.89)	$1,386.29
Apply wage index factor from Table 4B for patient in Grand Forks, ND (0.9098 * $1,386.29)	$1,261.25
Calculate the Non- Labor portion of the Prospective Payment Rate for FY 2001(.22332 * $1,784.89)	$398.60
Calculate Total Prospective Payment Rate for FY 2001 by adding the labor and non labor portion of the case-mix and wage index amounts ($1,261.25 + $398.60)	$1,659.85

Example 5. An HHA in Baltimore, MD assigns a patient to

an HHRG at the start of a 60-day episode. The claim for

the patient indicates that only two visits (one skilled

nursing and one home health aide) were furnished during

the 60-day episode. The HHA would be paid the low-

utilization payment adjustment. Any necessary adjustment
to the request for advance payment for the episode would
be made on subsequent claims for the HHA.

COMPUTATION OF WAGE INDEX ADJUSTED LOW UTILIZATION

PAYMENT

Number and Visit Discipline Type	Final Wage Standardized Per-Visit Payment Amounts Per 60-Day Episode for FY 2001 [1]
1 Skilled Nursing Visit	$95.79
1 Home Health Aide Visit	$43.37

[1] See Table 6 for the Calculation of Final Wage Standardized Per-Visit Payment Amounts Per 60-Day Episode for FY 2001.

Calculate the labor portion of the Standardized Per-Visit Payment Amount for 1 Skilled Nursing Visit (.77668 * $95.79)	$74.40
Apply wage index factor from Table 4B for Baltimore, MD (.9892 * $74.40)	$73.60
Calculate the non-labor portion of the Standardized Per-Visit Payment Amount for 1 Skilled Nursing Visit (.22332* $95.79)	$21.39
SUBTOTAL-Low Utilization Payment for 1 Wage Adjusted Skilled Nursing Visit rendered in a 60-day episode ($73.60 + $21.39)	$94.99
Calculate the labor portion of the Standardized Per-Visit Payment Amount for 1 home health aide visit (.77668* $43.37)	$33.69
Apply wage index factor from Table 4B for Baltimore, MD (.9892*$33.69)	$33.33
Calculate the non-labor portion of the Standardized Per-Visit Payment Amount for 1 home health aide visit (.22332 * $43.37)	$9.69
SUBTOTAL--Low Utilization Payment for 1 wage adjusted home health aide visit rendered in a 60-day episode ($33.33 + $9.69)	$43.02
Calculate Total Low Utilization Payment Adjustment for 2 visits provided during the 60- day episode by adding the wage adjusted skilled nursing visit and the wage adjusted home health aide visit ($94.99 + $43.02)	$138.01

G. Design and Methodology for Case-Mix Adjustment of 60-

Day Episode Payments

1.   Revisions to the Case-Mix Classification System

   In the proposed rule, we described a home health case-

mix system developed under a research contract with Abt

Associates, Inc., of Cambridge, Massachusetts. The case-
mix system uses selected data elements from the OASIS
assessment instrument and an additional data element
measuring receipt of at least 10 visits for therapy
services. The data elements are organized into three
dimensions to capture clinical severity factors,
functional severity factors, and services utilization
factors influencing case-mix. In the clinical and
functional dimensions, each data element is assigned a
score value derived from multiple regression analysis of
the Abt research data. The score value measures the
impact of the data element on total resource use. Scores
are also assigned to data elements in the services
utilization dimension. To find a patient's case-mix
group, the case-mix grouper sums the patient's scores
within each of the three dimensions. The resulting sum
is used to assign the patient to a severity level on each
dimension. There are four clinical severity levels, five
functional severity levels, and four services utilization
severity levels. Thus, there are 80 possible
combinations of severity levels across the three
dimensions. Each combination defines one of the 80
groups in the case-mix system. For example, a patient

with high clinical severity, moderate functional
severity, and low services utilization severity is placed
in the same group with all other patients whose summed
scores place them in the same set of severity levels for
the three dimensions.

The initial Abt Associates sample used to develop the
system described in the proposed rule was subsequently
augmented for a first round of refinements, as described
in the proposed rule. Following publication of the
proposed rule, we augmented the Abt Associates sample
with the remaining outstanding data from the 90
participating agencies, with the intention of re-
estimating the case-mix relative weights based on the
latest, most complete data available. We also pursued
another round of refinements to the system using the
augmented data, in response to public comments we
received. The sample for this phase of refinements
consisted of 19,204 initial episodes from the 90 agency
participants.

The public comments on case-mix are summarized with our
responses elsewhere in the rule. Below we describe the
process we used to revise the case-mix system and the
results. The revised case-mix model and scoring system

are summarized in Table 7, "Home Health Resource Group
Case-mix Classification Decision Tree Logic."

❗ Test of newly added data

Before pursuing statistical modeling in response to
comments, we checked the data newly added from the
participating agencies for consistency with the previous
data base. This involved re-estimating the regression
equations that determined the scores, adding observations
from the augmented, final sample. The results were
consistent with the scores in the proposed rule.
Additionally, we retested a short list of variables that
were eliminated from the case-mix model at the end of the
first round of refinements because of statistical
insignificance. Upon retesting, they were still found to
be statistically insignificant.

❗ Investigation of wound-related variables

In response to comments from the public, indicating
that certain wound care patients had costs higher than
predicted by the case-mix model, we returned to the
wound-related variables available on the OASIS for re-
investigation. We used the learning subsample from the
final, augmented sample. We tested three types of
changes: re-defining wound variables, adding more wound-

related variables, and adding variables to represent

interactions of wound variables with other variables.

Interactions capture additional potential sources of

severity or cost impact associated with certain types of

wound patients. For example, patients who have certain

diagnoses may be more susceptible to slow-healing wounds.

The statistical results suggested we could make

meaningful score distinctions and create additional

levels for the variables measuring the status of stasis

ulcers and surgical wounds. In the proposed rule, the

clinical dimension distinguished two statuses for the

most problematic observable stasis ulcer--not healing

(score=24) and all other statuses including no ulcer

(score=0). The refined definition defines three

statuses--early/partial granulation (score=14), not

healing (score=22), and all other statuses including no

observable ulcer (score=0). The proposed rule defined

two statuses for the most problematic observable surgical

wound--early/partial granulation or not healing

(score=10) and all other statuses including no observable

surgical wound (score=0). The refined definition defines

three statuses--early/partial granulation (score=7), not

healing (score=15), and all other statuses including no observable surgical wound (score=0).

We also retested the variables measuring pressure ulcers. We found no contribution to the model from adding variables measuring the status of pressure ulcers when the stage of the most problematic observable pressure ulcer was already in the model. We also determined that defining status levels beyond the three included in the proposed rule did not produce meaningful differences in the scores. Therefore, the final rule model continues to define three levels: stage 1 or 2 (score=15), stage 3 or 4 (score=36), and all other (including no pressure ulcer and no observable pressure ulcer) (score=0). In addition, we tested whether the number of pressure ulcers made an independent contribution to explaining resource use. We found that having more than one pressure ulcer was a significant predictor of resource use when the multiple ulcers were stage 3 or 4. Therefore, the model in the final rule includes a variable adding 17 points if the patient has two or more stage 3 or 4 pressure ulcers.

We tested a general variable that measured the presence of any kind of open wound, decubitus ulcer, stasis ulcer,

or surgical wound, based on an affirmative answer to M0445 (does patient have a pressure ulcer?), M0468 (does patient have a stasis ulcer?), M0482 (does patient have a surgical wound), or reporting of wound diagnosis codes in M0230 (primary home care diagnosis). This variable did not contribute statistically significant explanatory power when added to the model containing the other wound variables. However, we also tested separately a variable identifying burn or trauma patients with skin lesions or open wounds, identified from M0230 (primary diagnosis) and M0440 (does this patient have a skin lesion or an open wound?). This variable did contribute significantly and has been added to the model. The score for this variable is 21. The burn and trauma diagnosis code categories are shown in Table 8B.

In addition, we examined the impact of selected diagnoses that may be associated with difficult-to-heal wounds, including diabetes, atherosclerosis, peripheral vascular disease, and heart failure. We tested whether patients with these diagnoses should be assigned a higher score for their wound severity. Most results were not statistically significant. A few results were inconsistent across measures of wound severity. We also

tested a variable measuring whether limited mobility
results in higher cost impact for severe pressure ulcers,
but this variable did not contribute significantly to the
model after all other variables were included. The
reasons for the weak results and inconsistency are
unclear, and we did not make any of these changes to the
clinical dimension. We will continue to study these
types of issues during further refinement work on larger
samples with more detailed diagnostic data.

   Differences between the clinical dimension scores in
the proposed rule and the final rule are generally small.
Differences that do exist are attributable to our use of
an augmented sample and the use of new variables related
to wounds. In our model-building methodology, the scores
in the functional dimension depend on results of the
regression for deriving the clinical dimension scores.
New scores for the functional dimension are very similar
to the proposed-rule functional scores. Differences that
do exist are attributable to the above-mentioned changes
to the clinical dimension. The changes in functional
scoring lead to a slightly different set of severity-
score level intervals compared to the functional scoring
in the proposed rule. The functional severity-score

intervals are now minimal severity: 0-2; low severity:
3-15; moderate severity: 16-23; high severity: 24-29;
maximum severity: 30+. The frequency distribution of the
sample observations across the functional severity levels
is essentially unchanged.

   We validated the revised scoring for the clinical and
functional dimensions using the validation subsample of
the final, augmented sample. The results supported the
scoring system developed with the learning subsample.

   ! Re-examination of severity levels in clinical
dimension   In response to several comments on wound-care
patients, we refined the severity-score intervals in the
clinical dimension to better differentiate patients who
are clinically most severe from remaining patients. The
revised score intervals are as follows: minimal severity:
0-7; low severity: 8-19; moderate severity: 20-40; high
severity: 41+. To determine the refined severity-score
intervals, we used the same process we followed in
developing the case-mix system initially. We examined
the array of scores for natural clustering and the impact
of alternative sets of intervals on the proportion of
variation explained by the model (R-squared). We also
considered increases in the imbalance of the population

across severity levels. The refined severity score

intervals do result in more imbalance. The relative

frequencies in the Abt sample for the revised clinical

severity levels are 30 percent, 36 percent, 28 percent, 6

percent, for minimal, low, moderate, and high clinical

severity, respectively. In contrast, the previous

model's corresponding percentages were 30 percent, 30

percent, 23 percent, 17 percent. However, this change

has also generally resulted in higher case-mix relative

weights for the case-mix groups involving moderate and

high clinical severity, where the most severe wound

patients are likely to be found. It has also resulted in

a wider range of weights for therapy-threshold case-mix

groups and non-therapy-threshold case-mix groups.

! Comparison with the earlier model

All combined, the refinements made to the case-mix

model cause a modest improvement in explanatory power.

The proportion of variation explained (R-squared) is now

.34, compared to .32 for the model in the proposed rule.

The model now provides for more adequate payment for

wound care patients. Some of these high-cost patients

would have been assigned to a different group under the

model we presented in the proposed rule. Their removal

from those earlier groups potentially results in a lower average cost, and lower case-mix weight, for those groups. We examined the impact on the array of relative case-mix weights across the case- mix groups. For the most part, we find generally small changes in the individual weights other than the weights for groups involving the moderate and high clinical severity levels.

The case-mix system will continue to be studied and refined in future years. Larger and better data resources, and information accumulated from users like those who commented, will both contribute to the evolution of the system.

2. Diagnosis Coding Changes in the Revised Case-Mix Model

When we published the proposed rule, we listed ICD-9-CM three-digit diagnosis category codes to identify orthopedic, neurologic, and diabetes diagnoses recognized in the clinical dimension. The scores associated with these diagnoses were based on analysis of the OASIS primary diagnosis item (M0230). A commenter pointed out that certain diagnoses within the category codes we listed should never be reported as primary diagnoses, according to ICD-9-CM coding rules and official coding guidelines. These diagnoses must be used with a higher-coded diagnosis that indicates the underlying disease. The affected category codes are 711, 712, 713, 720, 730, 731, 320, 321, 323, 330, 331, 334, 336, 337, 357, 358.

Accordingly, we have revised the diagnosis coding list. The revised list shows the complete code for the affected category codes, and is divided into two sections, one for primary diagnoses and one for secondary diagnoses (see Table 8A). The case-mix system will recognize the appropriate score for a diagnosis that should never be reported as a primary diagnosis, provided that the diagnosis appears as the first OASIS secondary diagnosis

(line b, under OASIS M0240) and that the code shows all digits required by ICD-9-CM coding guidelines. Remaining diagnoses from the affected categories must appear as the primary diagnosis (line a, under OASIS M0230) and the code must show all digits required by ICD-9-CM coding rules. The case-mix system will not recognize remaining diagnoses from the affected categories if they appear as a secondary diagnosis on the OASIS record. Nor will it recognize diagnoses that must never be reported as primary if they are placed on the primary diagnosis line (line a, M0230).

The refined case-mix system recognizes burns and trauma primary diagnoses, if the OASIS item M0440 shows the patient has a skin lesion or open wound. The diagnosis code categories for burns and trauma diagnoses included in the case-mix system are shown in Table 8B.

A lack of specificity in diagnosis code assignment may be a hindrance to case-mix refinement. Agencies that voluntarily code all diagnoses to the complete four- or five-digit level in accordance with ICD-9-CM coding rules would help us in subsequent review and examination of the case-mix methodology.

Table 7--Home Health Resource Group Case-Mix Classification Decision Tree Logic

Clinical Severity Domain			
OASIS+ Item	**Description**	**Value**	**Scoring**
M0230/*M0240*	Primary home care diagnosis *(or initial secondary diagnosis ONLY for selected ICD-9 manifestation codes)*	*- credit <u>only</u> the single highest value:* If Orthopedic diagnostic group (DG)*, add 11 to score If Diabetes DG*, add 17 to score If Neurological DG*, add 20 to score	min = 0-7 low = 8-19 mod = 20-40 high = 41+
M0250	IV/Infusion/ Parenteral/Enteral Therapies	*- credit <u>only</u> the single highest value:* If box 1, add 14 to score If box 2, add 20 to score If box 3, add 24 to score	
M0390	Vision	If box 1 or 2, add 6 to score	
M0420	Pain	If box 2 or 3, add 5 to score	
M0440	Wound/Lesion	If box 1 and M0230 is Burn/Trauma DG*, add 21 to score	
M0450	Multiple pressure ulcers	If 2 or more stage 3 or 4 pressure ulcers, add 17 to score	
M0460	Most problematic pressure ulcer stage	If box 1 or 2, add 15 to score If box 3 or 4, add 36 to score	
M0476	Stasis ulcer status	If box 2, add 14 to score If box 3, add 22 to score	
M0488	Surgical wound status	If box 2, add 7 to score If box 3, add 15 to score	
M0490	Dyspnea	If box 2, 3 or 4, add 5 to score	
M0530	Urinary incontinence	If box 1 or 2, add 6 to score	
M0540	Bowel incontinence	If box 2-5, add 9 to score	
M0550	Bowel ostomy	If box 1 or 2, add 10 to score	
M0610	Behavioral Problems	If box 1-6, add 3 to score	

* See table for ICD9-CM codes included in each diagnosis group (DG)

Functional Status Domain			
OASIS+ Item	**Description**	**Value**	**Scoring**
M0650 (current) M0660 (current)	Dressing	If M0650 = box 1, 2 or 3 \ Or)-> add 4 to score M0660 = box 1, 2 or 3 /	Min = 0-2 Low = 3-15 Mod = 16-23
M0670 (current)	Bathing	If box 2, 3, 4 or 5 add 8 to score	High = 24-29
M0680 (current)	Toileting	If box 2 - 4, add 3 to score	Max =30+
M0690 (current)	Transferring	If box 1, add to 3 score If box 2 - 5, add to 6 score	
M0700 (current)	Locomotion	If box 1 or 2, add 6 to score If box 3 - 5, add 9 to score	

Service Utilization Domain			
Variable	**Description**	**Value**	**Scoring**
M0170 - line 1	NO Hospital discharge past 14 days	If box 1 IS BLANK, add 1 to score	Min = 0-2
M0170 - line 2 or 3	Inpatient rehab/SNF discharge past 14 days	If box 2 or 3, add 2 to score	Low = 3 Mod = 4-6
Receipt of Therapy	10 or more therapy visits	If yes, add 4 to score	High= 7

      Below are Tables 8A and 8B. Table 8A designates the

acceptable ICD-9 codes corresponding to the orthopedic,

neurological, and diabetes diagnosis groups for purposes

of case-mix classification. Table 8B designates the

acceptable ICD-9 codes corresponding to the burns and

trauma diagnoses added to the classification system as a

result of the described refinements.

TABLE 8A--Diagnosis Groups in the Clinical Dimension

Note: Codes shown at the 3-digit level include all the related 4- and 5-digit codes. Diagnoses

coded with 4 or 5 digits must be coded as shown to receive a score in the clinical dimension.

DIAGNOSIS GROUP	**ICD-9-CM CODE**	**DESCRIPTION**
PRIMARY DIAGNOSES		
DM	250	DIABETES MELLITUS
NEURO	013	CNS TUBERCULOSIS
NEURO	045	ACUTE POLIOMYELITIS
NEURO	046	CNS SLOW VIRUS INFECTION
NEURO	047	ENTEROVIRAL MENINGITIS
NEURO	048	OTH ENTEROVIRAL CNS DIS
NEURO	049	OTH NONARTHROPOD CNS VIR
NEURO	191	MALIGNANT NEOPLASM BRAIN
NEURO	192	MAL NEO NERVE NEC/NOS
NEURO	225	BENIGN NEO NERVOUS SYST
NEURO	320.0	HEMOPHILUS MENINGITIS
NEURO	320.1	PNEUMOCOCCAL MENINGITIS
NEURO	320.2	STREPTOCOCCAL MENINGITI
NEURO	320.3	STAPHYLOCOCC MENINGITIS
NEURO	320.81	ANAEROBIC MENINGITIS
NEURO	320.82	MNINGTS GRAM-NEG BCT NEC
NEURO	320.89	MENINGITIS OTH SPCF BAC
NEURO	320.9	BACTERIAL MENINGITIS NOS

DIAGNOSIS GROUP	ICD-9-CM CODE	DESCRIPTION
NEURO	322	MENINGITIS, UNSPECIFIED
NEURO	323.5	POSTIMMUNIZAT ENCEPHALI
NEURO	323.8	ENCEPHALITIS NEC
NEURO	323.9	ENCEPHALITIS NOS
NEURO	324	CNS ABSCESS
NEURO	325	PHLEBITIS INTRCRAN SINU
NEURO	326	LATE EFF CNS ABSCESS
NEURO	330.0	LEUKODYSTROPHY
NEURO	330.1	CEREBRAL LIPIDOSES
NEURO	330.8	CEREB DEGEN IN CHILD NEC
NEURO	330.9	CEREB DEGEN IN CHILD NOS
NEURO	331.0	ALZHEIMER'S DISEASE
NEURO	331.1	PICK'S DISEASE
NEURO	331.2	SENILE DEGENERAT BRAIN
NEURO	331.3	COMMUNICAT HYDROCEPHALU
NEURO	331.4	OBSTRUCTIV HYDROCEPHALU
NEURO	331.81	REYE'S SYNDROME
NEURO	331.89	CEREB DEGENERATION NEC
NEURO	331.9	CEREB DEGENERATION NOS
NEURO	332	PARKINSON'S DISEASE
NEURO	333	EXTRAPYRAMIDAL DIS NEC
NEURO	334.0	FRIEDREICH'S ATAXIA
NEURO	334.1	HERED SPASTIC PARAPLEGI
NEURO	334.2	PRIMARY CEREBELLAR DEGE
NEURO	334.3	CEREBELLAR ATAXIA NEC
NEURO	334.8	SPINOCEREBELLAR DIS NEC
NEURO	334.9	SPINOCEREBELLAR DIS NOS
NEURO	335	ANT HORN CELL DISEASE
NEURO	336.0	SYRINGOMYELIA
NEURO	336.1	VASCULAR MYELOPATHIES
NEURO	336.8	MYELOPATHY NEC
NEURO	336.9	SPINAL CORD DISEASE NOS
NEURO	337.0	IDIOPATH AUTO NEUROPATH
NEURO	337.20	UNSP RFLX SYMPTH DYSTRP
NEURO	337.21	RFLX SYM DYSTRPH UP LIM
NEURO	337.22	RFLX SYM DYSTRPH LWR LM
NEURO	337.29	RFLX SYM DYSTRPH OTH ST
NEURO	337.3	AUTONOMIC DYSREFLEXIA
NEURO	337.9	AUTONOMIC NERVE DIS NEC
NEURO	340	MULTIPLE SCLEROSIS
NEURO	341	OTHER CNS DEMYELINATION
NEURO	342	HEMIPLEGIA
NEURO	343	INFANTILE CEREBRAL PALSY
NEURO	344	OTH PARALYTIC SYNDROMES
NEURO	347	CATAPLEXY AND NARCOLEPS
NEURO	348	OTHER BRAIN CONDITIONS
NEURO	349	CNS DISORDER NEC/NOS
NEURO	352	DISORDER CRAN NERVE NEC
NEURO	356	HERED PERIPH NEUROPATHY

DIAGNOSIS GROUP	ICD-9-CM CODE	DESCRIPTION
NEURO	357.0	AC INFECT POLYNEURITIS
NEURO	357.5	ALCOHOLIC POLYNEUROPATH
NEURO	357.6	NEUROPATHY DUE TO DRUGS
NEURO	357.7	NEURPTHY TOXIC AGENT NEC
NEURO	357.8	INFLAM/TOX NEUROPTHY NEC
NEURO	357.9	INFLAM/TOX NEUROPTHY NOS
NEURO	358.0	MYASTHENIA GRAVIS
NEURO	358.2	TOXIC MYONEURAL DISORDE
NEURO	358.8	MYONEURAL DISORDERS NEC
NEURO	358.9	MYONEURAL DISORDERS NOS
NEURO	392	RHEUMATIC CHOREA
NEURO	430	SUBARACHNOID HEMORRHAGE
NEURO	431	INTRACEREBRAL HEMORRHAG
NEURO	432	INTRACRANIAL HEM NEC/NOS
NEURO	433	PRECEREBRAL OCCLUSION
NEURO	434	CEREBRAL ARTERY OCCLUS
NEURO	435	TRANSIENT CEREB ISCHEMIA
NEURO	436	CVA
NEURO	437	OTH CEREBROVASC DISEASE
NEURO	741	SPINA BIFIDA
NEURO	742	OTH NERVOUS SYSTEM ANOM
NEURO	851	CEREBRAL LACER/CONTUSION
NEURO	852	MENINGEAL HEM FOLLOW INJ
NEURO	853	OTH TRAUMATIC BRAIN HEM
NEURO	854	OTHER BRAIN INJURY
NEURO	907	LATE EFF NERV SYSTEM INJ
NEURO	950	INJ OPTIC NERV/PATHWAYS
NEURO	951	CRANIAL NERVE INJURY NEC
NEURO	952	SPINAL CORD INJ W/O FX
NEURO	953	INJ NERVE ROOT/SPIN PLEX
NEURO	954	INJURY OTH TRUNK NERVE
NEURO	955	INJ PERIPH NERV SHLD/ARM
NEURO	956	INJ PERIPH NERV PELV/LEG
ORTHO	170	MAL NEO BONE/ARTIC CART
ORTHO	171	MAL NEO SOFT TISSUE
ORTHO	213	BEN NEO BONE/ARTIC CART
ORTHO	274	GOUT
ORTHO	710	DIFF CONNECTIVE TISS DIS
ORTHO	711.00	PYOGEN ARTHRITIS-UNSPEC
ORTHO	711.01	PYOGEN ARTHRITIS-SHLDER
ORTHO	711.02	PYOGEN ARTHRITIS-UP/ARM
ORTHO	711.03	PYOGEN ARTHRITIS-FOREAR
ORTHO	711.04	PYOGEN ARTHRITIS-HAND
ORTHO	711.05	PYOGEN ARTHRITIS-PELVIS
ORTHO	711.06	PYOGEN ARTHRITIS-L/LEG
ORTHO	711.07	PYOGEN ARTHRITIS-ANKLE
ORTHO	711.08	PYOGEN ARTHRITIS NEC
ORTHO	711.09	PYOGEN ARTHRITIS-MULT
ORTHO	711.90	INF ARTHRITIS NOS-UNSPE

DIAGNOSIS GROUP	ICD-9-CM CODE	DESCRIPTION
ORTHO	711.91	INF ARTHRITIS NOS-SHLDE
ORTHO	711.92	INF ARTHRITIS NOS-UP/AR
ORTHO	711.93	INF ARTHRIT NOS-FOREARM
ORTHO	711.94	INF ARTHRIT NOS-HAND
ORTHO	711.95	INF ARTHRIT NOS-PELVIS
ORTHO	711.96	INF ARTHRIT NOS-L/LEG
ORTHO	711.97	INF ARTHRIT NOS-ANKLE
ORTHO	711.98	INF ARTHRIT NOS-OTH SIT
ORTHO	711.99	INF ARTHRITIS NOS-MULT
ORTHO	712.80	CRYST ARTHROP NEC-UNSPE
ORTHO	712.81	CRYST ARTHROP NEC-SHLDE
ORTHO	712.82	CRYST ARTHROP NEC-UP/AR
ORTHO	712.83	CRYS ARTHROP NEC-FOREAR
ORTHO	712.84	CRYST ARTHROP NEC-HAND
ORTHO	712.85	CRYST ARTHROP NEC-PELVI
ORTHO	712.86	CRYST ARTHROP NEC-L/LEG
ORTHO	712.87	CRYST ARTHROP NEC-ANKLE
ORTHO	712.88	CRY ARTHROP NEC-OTH SIT
ORTHO	712.89	CRYST ARTHROP NEC-MULT
ORTHO	712.90	CRYST ARTHROP NOS-UNSPE
ORTHO	712.91	CRYST ARTHROP NOS-SHLDR
ORTHO	712.92	CRYST ARTHROP NOS-UP/AR
ORTHO	712.93	CRYS ARTHROP NOS-FOREAR
ORTHO	712.94	CRYST ARTHROP NOS-HAND
ORTHO	712.95	CRYST ARTHROP NOS-PELVI
ORTHO	712.96	CRYST ARTHROP NOS-L/LEG
ORTHO	712.97	CRYST ARTHROP NOS-ANKLE
ORTHO	712.98	CRY ARTHROP NOS-OTH SIT
ORTHO	712.99	CRYST ARTHROP NOS-MULT
ORTHO	714	OTH INFLAMM POLYARTHROP
ORTHO	716	ARTHROPATHIES NEC/NOS
ORTHO	717	INTERNAL DERANGEMNT KNEE
ORTHO	718	OTHER JOINT DERANGEMENT
ORTHO	720.0	ANKYLOSING SPONDYLITIS
ORTHO	720.1	SPINAL ENTHESOPATHY
ORTHO	720.2	SACROILIITIS NEC
ORTHO	720.89	INFLAM SPONDYLOPATHY NEC
ORTHO	720.9	INFLAM SPONDYLOPATHY NOS
ORTHO	721	SPONDYLOSIS ET AL
ORTHO	722	INTERVERTEBRAL DISC DIS
ORTHO	723	OTHER CERVICAL SPINE DIS
ORTHO	724	BACK DISORDER NEC & NOS
ORTHO	725	POLYMYALGIA RHEUMATICA
ORTHO	728	DIS OF MUSCLE/LIG/FASCIA
ORTHO	730.00	AC OSTEOMYELITIS-UNSP
ORTHO	730.01	AC OSTEOMYELITIS-SHLDER
ORTHO	730.02	AC OSTEOMYELITIS-UP/ARM
ORTHO	730.03	AC OSTEOMYELITIS-FOREAR
ORTHO	730.04	AC OSTEOMYELITIS-HAND
ORTHO	730.05	AC OSTEOMYELITIS-PELVIS

DIAGNOSIS GROUP	ICD-9-CM CODE	DESCRIPTION
ORTHO	730.06	AC OSTEOMYELITIS-L/LEG
ORTHO	730.07	AC OSTEOMYELITIS-ANKLE
ORTHO	730.08	AC OSTEOMYELITIS NEC
ORTHO	730.09	AC OSTEOMYELITIS-MULT
ORTHO	730.10	CHR OSTEOMYELITIS-UNSP
ORTHO	730.11	CHR OSTEOMYELIT-SHLDER
ORTHO	730.12	CHR OSTEOMYELIT-UP/ARM
ORTHO	730.13	CHR OSTEOMYELIT-FOREARM
ORTHO	730.14	CHR OSTEOMYELIT-HAND
ORTHO	730.15	CHR OSTEOMYELIT-PELVIS
ORTHO	730.16	CHR OSTEOMYELIT-L/LEG
ORTHO	730.17	CHR OSTEOMYELIT-ANKLE
ORTHO	730.18	CHR OSTEOMYELIT NEC
ORTHO	730.19	CHR OSTEOMYELIT-MULT
ORTHO	730.20	OSTEOMYELITIS NOS-UNSPE
ORTHO	730.21	OSTEOMYELITIS NOS-SHLDE
ORTHO	730.22	OSTEOMYELITIS NOS-UP/AR
ORTHO	730.23	OSTEOMYELIT NOS-FOREARM
ORTHO	730.24	OSTEOMYELITIS NOS-HAND
ORTHO	730.25	OSTEOMYELITIS NOS-PELVI
ORTHO	730.26	OSTEOMYELITIS NOS-L/LEG
ORTHO	730.27	OSTEOMYELITIS NOS-ANKLE
ORTHO	730.28	OSTEOMYELIT NOS-OTH SIT
ORTHO	730.29	OSTEOMYELITIS NOS-MULT
ORTHO	730.30	PERIOSTITIS-UNSPEC
ORTHO	730.31	PERIOSTITIS-SHLDER
ORTHO	730.32	PERIOSTITIS-UP/ARM
ORTHO	730.33	PERIOSTITIS-FOREARM
ORTHO	730.34	PERIOSTITIS-HAND
ORTHO	730.35	PERIOSTITIS-PELVIS
ORTHO	730.36	PERIOSTITIS-L/LEG
ORTHO	730.37	PERIOSTITIS-ANKLE
ORTHO	730.38	PERIOSTITIS NEC
ORTHO	730.39	PERIOSTITIS-MULT
ORTHO	730.90	BONE INFEC NOS-UNSP SIT
ORTHO	730.91	BONE INFECT NOS-SHLDER
ORTHO	730.92	BONE INFECT NOS-UP/ARM
ORTHO	730.93	BONE INFECT NOS-FOREARM
ORTHO	730.94	BONE INFECT NOS-HAND
ORTHO	730.95	BONE INFECT NOS-PELVIS
ORTHO	730.96	BONE INFECT NOS-L/LEG
ORTHO	730.97	BONE INFECT NOS-ANKLE
ORTHO	730.98	BONE INFECT NOS-OTH SIT
ORTHO	730.99	BONE INFECT NOS-MULT
ORTHO	731.0	OSTEITIS DEFORMANS NOS
ORTHO	731.2	HYPERTROPH OSTEOARTHROP
ORTHO	732	OSTEOCHONDROPATHIES
ORTHO	781	NERV/MUSCULSKEL SYS SYMP

DIAGNOSIS GROUP	ICD-9-CM CODE	DESCRIPTION
ORTHO	800	SKULL VAULT FRACTURE
ORTHO	801	SKULL BASE FRACTURE
ORTHO	802	FRACTURE OF FACE BONES
ORTHO	803	OTHER SKULL FRACTURE
ORTHO	804	MULT FX SKULL W OTH BONE
ORTHO	805	VERTEBRL FX W/O CORD INJ
ORTHO	806	VERTEBRAL FX W CORD INJ
ORTHO	807	FX RIB/STERN/LARYN/TRACH
ORTHO	808	PELVIC FRACTURE
ORTHO	809	FRACTURE OF TRUNK BONES
ORTHO	810	CLAVICLE FRACTURE
ORTHO	811	SCAPULA FRACTURE
ORTHO	812	HUMERUS FRACTURE
ORTHO	813	RADIUS & ULNA FRACTURE
ORTHO	814	CARPAL FRACTURE
ORTHO	815	METACARPAL FRACTURE
ORTHO	816	FRACTURE PHALANGES, HAND
ORTHO	817	MULTIPLE HAND FRACTURES
ORTHO	818	FRACTURE ARM MULT/NOS
ORTHO	819	FX ARMS W RIB/STERNUM
ORTHO	820	FRACTURE NECK OF FEMUR
ORTHO	821	OTHER FEMORAL FRACTURE
ORTHO	822	PATELLA FRACTURE
ORTHO	823	TIBIA & FIBULA FRACTURE
ORTHO	824	ANKLE FRACTURE
ORTHO	825	FX OF TARSAL/METATARSAL
ORTHO	827	LOWER LIMB FRACTURE NEC
ORTHO	828	FX LEGS W ARM/RIB
ORTHO	831	SHOULDER DISLOCATION
ORTHO	832	ELBOW DISLOCATION
ORTHO	833	WRIST DISLOCATION
ORTHO	835	DISLOCATION OF HIP
ORTHO	836	DISLOCATION OF KNEE
ORTHO	837	DISLOCATION OF ANKLE
ORTHO	838	DISLOCATION OF FOOT
ORTHO	846	SPRAIN SACROILIAC REGION
ORTHO	847	SPRAIN OF BACK NEC/NOS
ORTHO	887	TRAUMATIC AMPUT ARM/HAND
ORTHO	896	TRAUMATIC AMPUTAT FOOT
ORTHO	897	TRAUMATIC AMPUTATION LEG
ORTHO	927	CRUSHING INJ UPPER LIMB
ORTHO	928	CRUSHING INJURY OF LEG
SECONDARY DIAGNOSES		

The following diagnoses should never be used as primary diagnoses, according to ICD-9-CM coding guidelines.

The case-mix system will recognize them in the clinical dimension if they appear as the first secondary diagnosis (line b, M0240 on the OASIS record). Diagnoses coded with 4 or 5 digits must be coded as shown to be recognized in the clinical dimension.

DIAGNOSIS GROUP	ICD-9-CM CODE	DESCRIPTION
NEURO	320.7	MENINGITIS IN OTH BAC
NEURO	321.0	CRYPTOCOCCAL MENINGITIS
NEURO	321.1	MENING IN OTH FUNGAL DI
NEURO	321.2	MENING IN OTH VIRAL DIS
NEURO	321.3	TRYPANOSOMIASIS MENINGI
NEURO	321.4	MENINGIT D/T SARCOIDOSI
NEURO	321.8	MENING IN OTH NONBAC DI
NEURO	323.0	ENCEPHALIT IN VIRAL DIS
NEURO	323.1	RICKETTSIAL ENCEPHALITI
NEURO	323.2	PROTOZOAL ENCEPHALITIS
NEURO	323.4	OTH ENCEPHALIT D/T INFE
NEURO	323.6	POSTINFECT ENCEPHALITIS
NEURO	323.7	TOXIC ENCEPHALITIS
NEURO	330.2	CEREB DEGEN IN LIPIDOSI
NEURO	330.3	CERB DEG CHLD IN OTH DI
NEURO	331.7	CEREB DEGEN IN OTH DIS
NEURO	334.4	CEREBEL ATAX IN OTH DIS
NEURO	336.2	COMB DEG CORD IN OTH DI
NEURO	336.3	MYELOPATHY IN OTH DIS
NEURO	337.1	AUT NEUROPTHY IN OTH DI
NEURO	357.1	NEURPTHY IN COL VASC DI
NEURO	357.2	NEUROPATHY IN DIABETES
NEURO	357.3	NEUROPATHY IN MALIG DIS
NEURO	357.4	NEUROPATHY IN OTHER DIS
NEURO	358.1	MYASTHENIA IN OTH DIS
ORTHO	711.10	REITER ARTHRITIS-UNSPEC
ORTHO	711.11	REITER ARTHRITIS-SHLDER
ORTHO	711.12	REITER ARTHRITIS-UP/ARM
ORTHO	711.13	REITER ARTHRITIS-FOREAR
ORTHO	711.14	REITER ARTHRITIS-HAND
ORTHO	711.15	REITER ARTHRITIS-PELVIS
ORTHO	711.16	REITER ARTHRITIS-L/LEG
ORTHO	711.17	REITER ARTHRITIS-ANKLE
ORTHO	711.18	REITER ARTHRITIS NEC
ORTHO	711.19	REITER ARTHRITIS-MULT
ORTHO	711.20	BEHCET ARTHRITIS-UNSPEC
ORTHO	711.21	BEHCET ARTHRITIS-SHLDER
ORTHO	711.22	BEHCET ARTHRITIS-UP/ARM
ORTHO	711.23	BEHCET ARTHRITIS-FOREAR
ORTHO	711.24	BEHCET ARTHRITIS-HAND
ORTHO	711.25	BEHCET ARTHRITIS-PELVIS
ORTHO	711.26	BEHCET ARTHRITIS-L/LEG
ORTHO	711.27	BEHCET ARTHRITIS-ANKLE
ORTHO	711.28	BEHCET ARTHRITIS NEC
ORTHO	711.29	BEHCET ARTHRITIS-MULT
ORTHO	711.30	DYSENTER ARTHRIT-UNSPEC
ORTHO	711.31	DYSENTER ARTHRIT-SHLDER
ORTHO	711.32	DYSENTER ARTHRIT-UP/ARM

DIAGNOSIS GROUP	ICD-9-CM CODE	DESCRIPTION
ORTHO	711.33	DYSENTER ARTHRIT-FOREAR
ORTHO	711.34	DYSENTER ARTHRIT-HAND
ORTHO	711.35	DYSENTER ARTHRIT-PELVIS
ORTHO	711.36	DYSENTER ARTHRIT-L/LEG
ORTHO	711.37	DYSENTER ARTHRIT-ANKLE
ORTHO	711.38	DYSENTER ARTHRIT NEC
ORTHO	711.39	DYSENTER ARTHRIT-MULT
ORTHO	711.40	BACT ARTHRITIS-UNSPEC
ORTHO	711.41	BACT ARTHRITIS-SHLDER
ORTHO	711.42	BACT ARTHRITIS-UP/ARM
ORTHO	711.43	BACT ARTHRITIS-FOREARM
ORTHO	711.44	BACT ARTHRITIS-HAND
ORTHO	711.45	BACT ARTHRITIS-PELVIS
ORTHO	711.46	BACT ARTHRITIS-L/LEG
ORTHO	711.47	BACT ARTHRITIS-ANKLE
ORTHO	711.48	BACT ARTHRITIS NEC
ORTHO	711.49	BACT ARTHRITIS-MULT
ORTHO	711.50	VIRAL ARTHRITIS-UNSPEC
ORTHO	711.51	VIRAL ARTHRITIS-SHLDER
ORTHO	711.52	VIRAL ARTHRITIS-UP/ARM
ORTHO	711.53	VIRAL ARTHRITIS-FOREARM
ORTHO	711.54	VIRAL ARTHRITIS-HAND
ORTHO	711.55	VIRAL ARTHRITIS-PELVIS
ORTHO	711.56	VIRAL ARTHRITIS-L/LEG
ORTHO	711.57	VIRAL ARTHRITIS-ANKLE
ORTHO	711.58	VIRAL ARTHRITIS NEC
ORTHO	711.59	VIRAL ARTHRITIS-MULT
ORTHO	711.60	MYCOTIC ARTHRITIS-UNSPE
ORTHO	711.61	MYCOTIC ARTHRITIS-SHLDE
ORTHO	711.62	MYCOTIC ARTHRITIS-UP/AR
ORTHO	711.63	MYCOTIC ARTHRIT-FOREARM
ORTHO	711.64	MYCOTIC ARTHRITIS-HAND
ORTHO	711.65	MYCOTIC ARTHRITIS-PELVI
ORTHO	711.66	MYCOTIC ARTHRITIS-L/LEG
ORTHO	711.67	MYCOTIC ARTHRITIS-ANKLE
ORTHO	711.68	MYCOTIC ARTHRITIS NEC
ORTHO	711.69	MYCOTIC ARTHRITIS-MULT
ORTHO	711.70	HELMINTH ARTHRIT-UNSPEC
ORTHO	711.71	HELMINTH ARTHRIT-SHLDER
ORTHO	711.72	HELMINTH ARTHRIT-UP/ARM
ORTHO	711.73	HELMINTH ARTHRIT-FOREAR
ORTHO	711.74	HELMINTH ARTHRIT-HAND
ORTHO	711.75	HELMINTH ARTHRIT-PELVIS
ORTHO	711.76	HELMINTH ARTHRIT-L/LEG
ORTHO	711.77	HELMINTH ARTHRIT-ANKLE
ORTHO	711.78	HELMINTH ARTHRIT NEC
ORTHO	711.79	HELMINTH ARTHRIT-MULT
ORTHO	711.80	INF ARTHRITIS NEC-UNSPE

DIAGNOSIS GROUP	ICD-9-CM CODE	DESCRIPTION
ORTHO	711.81	INF ARTHRITIS NEC-SHLDE
ORTHO	711.82	INF ARTHRITIS NEC-UP/AR
ORTHO	711.83	INF ARTHRIT NEC-FOREARM
ORTHO	711.84	INF ARTHRITIS NEC-HAND
ORTHO	711.85	INF ARTHRITIS NEC-PELVI
ORTHO	711.86	INF ARTHRITIS NEC-L/LEG
ORTHO	711.87	INF ARTHRITIS NEC-ANKLE
ORTHO	711.88	INF ARTHRIT NEC-OTH SIT
ORTHO	711.89	INF ARTHRITIS NEC-MULT
ORTHO	712.10	DICALC PHOS CRYST-UNSPE
ORTHO	712.11	DICALC PHOS CRYST-SHLDE
ORTHO	712.12	DICALC PHOS CRYST-UP/AR
ORTHO	712.13	DICALC PHOS CRYS-FOREAR
ORTHO	712.14	DICALC PHOS CRYST-HAND
ORTHO	712.15	DICALC PHOS CRYST-PELVI
ORTHO	712.16	DICALC PHOS CRYST-L/LEG
ORTHO	712.17	DICALC PHOS CRYST-ANKLE
ORTHO	712.18	DICALC PHOS CRY-SITE NE
ORTHO	712.19	DICALC PHOS CRYST-MULT
ORTHO	712.20	PYROPHOSPH CRYST-UNSPEC
ORTHO	712.21	PYROPHOSPH CRYST-SHLDER
ORTHO	712.22	PYROPHOSPH CRYST-UP/ARM
ORTHO	712.23	PYROPHOSPH CRYST-FOREAR
ORTHO	712.24	PYROPHOSPH CRYST-HAND
ORTHO	712.25	PYROPHOSPH CRYST-PELVIS
ORTHO	712.26	PYROPHOSPH CRYST-L/LEG
ORTHO	712.27	PYROPHOSPH CRYST-ANKLE
ORTHO	712.28	PYROPHOS CRYST-SITE NEC
ORTHO	712.29	PYROPHOS CRYST-MULT
ORTHO	712.30	CHONDROCALCIN NOS-UNSPE
ORTHO	712.31	CHONDROCALCIN NOS-SHLDE
ORTHO	712.32	CHONDROCALCIN NOS-UP/AR
ORTHO	712.33	CHONDROCALC NOS-FOREARM
ORTHO	712.34	CHONDROCALCIN NOS-HAND
ORTHO	712.35	CHONDROCALCIN NOS-PELVI
ORTHO	712.36	CHONDROCALCIN NOS-L/LEG
ORTHO	712.37	CHONDROCALCIN NOS-ANKLE
ORTHO	712.38	CHONDROCALC NOS-OTH SIT
ORTHO	712.39	CHONDROCALCIN NOS-MULT
ORTHO	713.0	ARTHROP W ENDOCR/MET DI
ORTHO	713.1	ARTHROP W NONINF GI DIS
ORTHO	713.2	ARTHROPATH W HEMATOL DI
ORTHO	713.3	ARTHROPATHY W SKIN DIS
ORTHO	713.4	ARTHROPATHY W RESP DIS
ORTHO	713.5	ARTHROPATHY W NERVE DIS
ORTHO	713.6	ARTHROP W HYPERSEN REAC
ORTHO	713.7	ARTHROP W SYSTEM DIS NE
ORTHO	713.8	ARTHROP W OTH DIS NEC

DIAGNOSIS GROUP	ICD-9-CM CODE	DESCRIPTION
ORTHO	720.81	SPONDYLOPATHY IN OTH DI
ORTHO	730.70	POLIO OSTEOPATHY-UNSPEC
ORTHO	730.71	POLIO OSTEOPATHY-SHLDER
ORTHO	730.72	POLIO OSTEOPATHY-UP/ARM
ORTHO	730.73	POLIO OSTEOPATHY-FOREAR
ORTHO	730.74	POLIO OSTEOPATHY-HAND
ORTHO	730.75	POLIO OSTEOPATHY-PELVIS
ORTHO	730.76	POLIO OSTEOPATHY-L/LEG
ORTHO	730.77	POLIO OSTEOPATHY-ANKLE
ORTHO	730.78	POLIO OSTEOPATHY NEC
ORTHO	730.79	POLIO OSTEOPATHY-MULT
ORTHO	730.80	BONE INFECT NEC-UNSPEC
ORTHO	730.81	BONE INFECT NEC-SHLDER
ORTHO	730.82	BONE INFECT NEC-UP/ARM
ORTHO	730.83	BONE INFECT NEC-FOREARM
ORTHO	730.84	BONE INFECT NEC-HAND
ORTHO	730.85	BONE INFECT NEC-PELVIS
ORTHO	730.86	BONE INFECT NEC-L/LEG
ORTHO	730.87	BONE INFECT NEC-ANKLE
ORTHO	730.88	BONE INFECT NEC-OTH SIT
ORTHO	730.89	BONE INFECT NEC-MULT
ORTHO	731.1	OSTEITIS DEF IN OTH DIS
ORTHO	731.8	BONE INVOLV IN OTH DIS

TABLE 8B--Burns and Trauma Diagnoses

Note: Codes shown at the 3-digit level include all of the related 4- and 5-digit codes. Burns and trauma diagnoses are included in the clinical dimension if the diagnosis is the primary diagnosis and if box 1 of the OASIS item M0440 is checked.

ICD-9-CM CODE	DESCRIPTION
870	OCULAR ADNEXA OPEN WOUND
872	OPEN WOUND OF EAR
873	OTHER OPEN WOUND OF HEAD
874	OPEN WOUND OF NECK
875	OPEN WOUND OF CHEST
876	OPEN WOUND OF BACK
877	OPEN WOUND OF BUTTOCK
878	OPEN WOUND GENITAL ORGAN
879	OPEN WOUND SITE NEC
880	OPN WND SHOULDR/UPPR ARM
881	OPEN WOUND OF LOWER ARM
882	OPEN WOUND OF HAND
883	OPEN WOUND OF FINGER
884	OPEN WOUND ARM MULT/NOS
885	TRAUM AMPUTATION THUMB
886	TRAUM AMPUTATION FINGER
890	OPEN WOUND OF HIP/THIGH
891	OPEN WND KNEE/LEG/ANKLE
892	OPEN WOUND OF FOOT
893	OPEN WOUND OF TOE
894	OPEN WOUND OF LEG NEC
895	TRAUMATIC AMPUTATION TOE
941	BURN OF HEAD/FACE/NECK
942	BURN OF TRUNK
943	BURN OF ARM
944	BURN OF HAND & WRIST
945	BURN OF LEG
946	BURN OF MULTIPLE SITE
948	BURN BY % BODY SURFACE
949	BURN UNSPECIFIED

3.   Determining the Case-Mix Indices

Calculation of the case-mix relative weights

    We derived the relative weights for the case-mix

groups from a straightforward multiple regression

analysis. The data for the regression came from the Abt sample episodes with more than four visits (the same sample used to develop and validate the case-mix model).

The coefficients that resulted from the regression equation are shown below. The multiple regression coefficients are estimates of the average addition to resource cost due to each severity level above the lowest-severity case-mix group (C0F0S0). For each case-mix group, the average resource cost is calculated from the sum of the appropriate regression coefficients. In the example below, the average resource cost for case-mix group C3F0S3 is the sum of the average resource cost for the base group (C0F0S0) plus the average additional cost due to C3 plus the average additional cost due to S3. We then used the computed case-mix-group average resource costs to find the relative case- mix weights. Specifically, the case-mix group averages (that is, sum of appropriate regression coefficients) are divided by the overall average resource cost. The case-mix weights are shown in Table 9.

The methodology for calculating the case-mix weights is the same one we used to find the case-mix weights in the proposed rule, except that we did not use weighted

regression for the final rule. We determined that the

distribution of the unweighted Abt Associates data better

resembled the 1998 episode file distribution than did the

weighted Abt Associates data. Thus, unweighted

regression was the appropriate methodology. As stated in

the proposed rule, we plan to refine the case-mix weights

to adjust for changes in patient population, actual

changes in home health care practice patterns, and

changes in the coding or classification of patients that

do not reflect real changes in case-mix.

Regression coefficients for calculating case-mix relative
weights

```
INTERCEPT*      $1271.95
C1   $230.98
C2   $652.42
C3   $1620.75
F1   $229.14
F2   $479.30
F3   $571.20
F4   $976.08
S1   $195.53
S2   $2315.15
S3   $2923.22
```

* Intercept value is the average resource cost for the
base group, C0F0S0

Example:

Calculate case-mix relative weight for group C3F0S3

Overall average resource cost (scaled to national average

episode cost): $2416.00

Relative weight = average resource cost for group C3F0S3

divided by overall average resource cost

      =(base group cost +C3 increment + S3

increment)/overall average resource cost

      =(1271.95+1620.75+2923.22)/2416.00

      =2.4073

Below we show the average resource cost calculated

from the regression coefficients for each case-mix group.

Regression Coefficient	Average Resource Cost
C0F0S0	$1,271.95
C0F0S1	$1,467.48
C0F0S2	$3,587.10
C0F0S3	$4,195.17
C0F1S0	$1,501.09
C0F1S1	$1,696.62
C0F1S2	$3,816.24
C0F1S3	$4,424.31
C0F2S0	$1,751.25
C0F2S1	$1,946.77
C0F2S2	$4,066.40
C0F2S3	$4,674.46
C0F3S0	$1,843.15
C0F3S1	$2,038.68
C0F3S2	$4,158.30
C0F3S3	$4,766.37

Regression Coefficient	Average Resource Cost
C0F4S0	$2,248.03
C0F4S1	$2,443.56
C0F4S2	$4,563.18
C0F4S3	$5,171.25
C1F0S0	$1,502.93
C1F0S1	$1,698.46
C1F0S2	$3,818.08
C1F0S3	$4,426.15
C1F1S0	$1,732.07
C1F1S1	$1,927.60
C1F1S2	$4,047.22
C1F1S3	$4,655.29
C1F2S0	$1,982.23
C1F2S1	$2,177.75
C1F2S2	$4,297.38
C1F2S3	$4,905.45
C1F3S0	$2,074.13
C1F3S1	$2,269.66
C1F3S2	$4,389.28
C1F3S3	$4,997.35
C1F4S0	$2,479.01
C1F4S1	$2,674.54
C1F4S2	$4,794.16
C1F4S3	$5,402.23
C2F0S0	$1,924.37
C2F0S1	$2,119.90
C2F0S2	$4,239.52
C2F0S3	$4,847.59

Regression Coefficient	Average Resource Cost
C2F1S0	$2,153.51
C2F1S1	$2,349.04
C2F1S2	$4,468.66
C2F1S3	$5,076.73
C2F2S0	$2,403.67
C2F2S1	$2,599.19
C2F2S2	$4,718.82
C2F2S3	$5,326.89
C2F3S0	$2,495.57
C2F3S1	$2,691.10
C2F3S2	$4,810.72
C2F3S3	$5,418.79
C2F4S0	$2,900.45
C2F4S1	$3,095.98
C2F4S2	$5,215.61
C2F4S3	$5,823.67
C3F0S0	$2,892.70
C3F0S1	$3,088.23
C3F0S2	$5,207.85
C3F0S3	$5,815.92
C3F1S0	$3,121.84
C3F1S1	$3,317.37
C3F1S2	$5,436.99
C3F1S3	$6,045.06
C3F2S0	$3,372.00
C3F2S1	$3,567.52
C3F2S2	$5,687.15
C3F2S3	$6,295.22

Regression Coefficient	Average Resource Cost
C3F3S0	$3,463.91
C3F3S1	$3,659.43
C3F3S2	$5,779.06
C3F3S3	$6,387.12
C3F4S0	$3,868.79
C3F4S1	$4,064.31
C3F4S2	$6,183.94
C3F4S3	$6,792.00

Construction of the Relative Weights for the HHRGs

Table 9--Relative Case-Mix Weights Corresponding to Home Health Resource Groups

HHRG Group	HHRG Description	Case-Mix Weight
C0F0S0	"Clinical=Min,Functional=Min,Service=Min"	0.5265
C0F0S1	"Clinical=Min,Functional=Min,Service=Low"	0.6074
C0F0S2	"Clinical=Min,Functional=Min,Service=Mod"	1.4847
C0F0S3	"Clinical=Min,Functional=Min,Service=High"	1.7364
C0F1S0	"Clinical=Min,Functional=Low,Service=Min"	0.6213
C0F1S1	"Clinical=Min,Functional=Low,Service=Low"	0.7022
C0F1S2	"Clinical=Min,Functional=Low,Service=Mod"	1.5796
C0F1S3	"Clinical=Min,Functional=Low,Service=High"	1.8313
C0F2S0	"Clinical=Min,Functional=Mod,Service=Min"	0.7249
C0F2S1	"Clinical=Min,Functional=Mod,Service=Low"	0.8058
C0F2S2	"Clinical=Min,Functional=Mod,Service=Mod"	1.6831
C0F2S3	"Clinical=Min,Functional=Mod,Service=High"	1.9348
C0F3S0	"Clinical=Min,Functional=High,Service=Min"	0.7629
C0F3S1	"Clinical=Min,Functional=High,Service=Low"	0.8438
C0F3S2	"Clinical=Min,Functional=High,Service=Mod"	1.7212

HHRG Group	HHRG Description	Case-Mix Weight
C0F3S3	"Clinical=Min,Functional=High,Service=High"	1.9728
C0F4S0	"Clinical=Min,Functional=Max,Service=Min"	0.9305
C0F4S1	"Clinical=Min,Functional=Max,Service=Low"	1.0114
C0F4S2	"Clinical=Min,Functional=Max,Service=Mod"	1.8887
C0F4S3	"Clinical=Min,Functional=Max,Service=High"	2.1404
C1F0S0	"Clinical=Low,Functional=Min,Service=Min"	0.6221
C1F0S1	"Clinical=Low,Functional=Min,Service=Low"	0.7030
C1F0S2	"Clinical=Low,Functional=Min,Service=Mod"	1.5803
C1F0S3	"Clinical=Low,Functional=Min,Service=High"	1.8320
C1F1S0	"Clinical=Low,Functional=Low,Service=Min"	0.7169
C1F1S1	"Clinical=Low,Functional=Low,Service=Low"	0.7978
C1F1S2	"Clinical=Low,Functional=Low,Service=Mod"	1.6752
C1F1S3	"Clinical=Low,Functional=Low,Service=High"	1.9269
C1F2S0	"Clinical=Low,Functional=Mod,Service=Min"	0.8205
C1F2S1	"Clinical=Low,Functional=Mod,Service=Low"	0.9014
C1F2S2	"Clinical=Low,Functional=Mod,Service=Mod"	1.7787
C1F2S3	"Clinical=Low,Functional=Mod,Service=High"	2.0304
C1F3S0	"Clinical=Low,Functional=High,Service=Min"	0.8585
C1F3S1	"Clinical=Low,Functional=High,Service=Low"	0.9394
C1F3S2	"Clinical=Low,Functional=High,Service=Mod"	1.8168
C1F3S3	"Clinical=Low,Functional=High,Service=High"	2.0684
C1F4S0	"Clinical=Low,Functional=Max,Service=Min"	1.0261
C1F4S1	"Clinical=Low,Functional=Max,Service=Low"	1.1070
C1F4S2	"Clinical=Low,Functional=Max,Service=Mod"	1.9843
C1F4S3	"Clinical=Low,Functional=Max,Service=High"	2.2360
C2F0S0	"Clinical=Mod,Functional=Min,Service=Min"	0.7965
C2F0S1	"Clinical=Mod,Functional=Min,Service=Low"	0.8774
C2F0S2	"Clinical=Mod,Functional=Min,Service=Mod"	1.7548

HHRG Group	HHRG Description	Case-Mix Weight
C2F0S3	"Clinical=Mod,Functional=Min,Service=High"	2.0065
C2F1S0	"Clinical=Mod,Functional=Low,Service=Min"	0.8914
C2F1S1	"Clinical=Mod,Functional=Low,Service=Low"	0.9723
C2F1S2	"Clinical=Mod,Functional=Low,Service=Mod"	1.8496
C2F1S3	"Clinical=Mod,Functional=Low,Service=High"	2.1013
C2F2S0	"Clinical=Mod,Functional=Mod,Service=Min"	0.9949
C2F2S1	"Clinical=Mod,Functional=Mod,Service=Low"	1.0758
C2F2S2	"Clinical=Mod,Functional=Mod,Service=Mod"	1.9532
C2F2S3	"Clinical=Mod,Functional=Mod,Service=High"	2.2048
C2F3S0	"Clinical=Mod,Functional=High,Service=Min"	1.0329
C2F3S1	"Clinical=Mod,Functional=High,Service=Low"	1.1139
C2F3S2	"Clinical=Mod,Functional=High,Service=Mod"	1.9912
C2F3S3	"Clinical=Mod,Functional=High,Service=High"	2.2429
C2F4S0	"Clinical=Mod,Functional=Max,Service=Min"	1.2005
C2F4S1	"Clinical=Mod,Functional=Max,Service=Low"	1.2814
C2F4S2	"Clinical=Mod,Functional=Max,Service=Mod"	2.1588
C2F4S3	"Clinical=Mod,Functional=Max,Service=High"	2.4105
C3F0S0	"Clinical=High,Functional=Min,Service=Min"	1.1973
C3F0S1	"Clinical=High,Functional=Min,Service=Low"	1.2782
C3F0S2	"Clinical=High,Functional=Min,Service=Mod"	2.1556
C3F0S3	"Clinical=High,Functional=Min,Service=High"	2.4073
C3F1S0	"Clinical=High,Functional=Low,Service=Min"	1.2922
C3F1S1	"Clinical=High,Functional=Low,Service=Low"	1.3731
C3F1S2	"Clinical=High,Functional=Low,Service=Mod"	2.2504
C3F1S3	"Clinical=High,Functional=Low,Service=High"	2.5021
C3F2S0	"Clinical=High,Functional=Mod,Service=Min"	1.3957
C3F2S1	"Clinical=High,Functional=Mod,Service=Low"	1.4766
C3F2S2	"Clinical=High,Functional=Mod,Service=Mod"	2.3540

HHRG Group	HHRG Description	Case-Mix Weight
C3F2S3	"Clinical=High,Functional=Mod,Service=High"	2.6056
C3F3S0	"Clinical=High,Functional=High,Service=Min"	1.4337
C3F3S1	"Clinical=High,Functional=High,Service=Low"	1.5147
C3F3S2	"Clinical=High,Functional=High,Service=Mod"	2.3920
C3F3S3	"Clinical=High,Functional=High,Service=High"	2.6437
C3F4S0	"Clinical=High,Functional=Max,Service=Min"	1.6013
C3F4S1	"Clinical=High,Functional=Max,Service=Low"	1.6822
C3F4S2	"Clinical=High,Functional=Max,Service=Mod"	2.5596
C3F4S3	"Clinical=High,Functional=Max,Service=High"	2.8113

H. Consolidated Billing

1. Background

Under the HHA consolidated billing requirement established by sections 4603(c)(2)(B) and (c)(2)(C) of the BBA, the HHA that establishes the home health plan of care has the Medicare billing responsibility for all of the Medicare-covered home health services listed in section 1861(m) of the Act that the patient receives and are ordered by the physician in the plan of care. Section 305 of BBRA of 1999 amended the consolidated billing language governing home health PPS by eliminating DME covered as a home health service from the consolidated billing requirements.

2. HHA Consolidated Billing Legislation

! **Specific Provisions of the Legislation**

Sections 4603(c)(2)(B) and (c)(2)(C) of the BBA amend sections 1842(b)(6) and 1862(a) of the Act, respectively, to require a new consolidated billing and bundling of all home health services while a beneficiary is under the plan of care. The statute now requires payment for all items and services to be made to an agency. As stated above, section 305 of BBRA of 1999 excludes DME covered as a home health service from the consolidated billing requirements.

Specifically, the law requires, "in the case of home health services (including medical supplies described in section 1861(m)(5), but excluding durable medical equipment to the extent provided for in such section) furnished to an individual who (at the time the item or service is furnished) is under the plan of care of a home health agency, payment shall be made to the agency (without regard to whether or not the item or service was furnished by the agency, by others under arrangement with them made by the agency, or when any other contracting or consulting arrangement, or otherwise)."

Moreover, there will be separate payment for DME
items and services provided under the home health
benefit, which are under the DME fee schedule. As
discussed previously, under the HHA PPS, DME covered as
a home health service as part of the Medicare home
health benefit will continue to be paid under the DME
fee schedule and will also be excluded from the
consolidated billing requirements. In addition to the
prospective payment amount for home health services a
separate payment amount will be made for DME currently
covered as a home health service under the PPS.

3. Types of Services That Are Subject to the Provision

Under the consolidated billing requirement, we
require that the HHA must submit all Medicare claims
for all home health services included in section
1861(m) of the Act (including medical supplies
described in section 1861(m)(5)) of the Act, but
excluding DME to the extent provided for in such
section), while the beneficiary is under the home
health plan of care established by a physician and
eligible for the home health benefit. The home health
services included in consolidated billing are:

! Part-time or intermittent skilled nursing care.

! Part-time or intermittent home health aide services.

! Physical therapy.

! Speech-language pathology.

! Occupational therapy, medical social services.

! Routine and nonroutine medical supplies.

! A covered osteoporosis drug (as defined in section 1861(kk) of the Act-(not paid under PPS rate, see 1833(a)(2)(A)), but excluding other drugs and biologicals).

! Medical services provided by an intern or resident-in-training of the hospital, under an approved teaching program of the hospital in the case of an HHA that is affiliated or under common control with a hospital.

! Services at hospitals, SNFs, or rehabilitation centers when they involve equipment too cumbersome to bring to the home.

4. Effects of This Provision

HHAs will no longer be able to "unbundle" services to an outside supplier that can then submit a separate bill directly to the Part B carrier. Instead, the HHA itself will have to furnish the home health services

(except DME) either directly or under an arrangement with an outside supplier in which the HHA itself, rather than the supplier, bills Medicare. With the exception of DME, the outside supplier must look to the HHA rather than to Medicare Part B for payment. Beneficiaries receiving DME prior to establishment of a home health plan of care, can continue the relationship with that same DME supplier. The consolidated billing requirement eliminates the potential for duplicative billings for the same services to the RHHI by the HHA and to the Part B carrier by an outside supplier. All covered home health services listed in section 1861(m) of the Act, (including medical supplies described in section 1861(m)(5) of the Act, but excluding DME to the extent provided in such section) ordered in the patient's plan of care must be billed by the HHA.

As discussed in the proposed rule published on October 28, 1999, the responsibility for consolidated billing moves to the transfer HHA. The consolidated billing requirement enhances the HHA's capacity to meet its existing responsibility to oversee and coordinate the Medicare-covered home health services that each of its patients receives.

Consistent with SNF PPS consolidated billing, the beneficiary exercises his or her freedom of choice for the entire home health benefit of services listed in section 1861(m) of the Act, including medical supplies described in section 1861(m)(5) of the Act, but excluding DME as a home health service by choosing the HHA. Once a home health patient chooses a particular HHA, he or she has clearly exercised freedom of choice with respect to all items and services included within the scope of the Medicare home health benefit (except DME). The HHA's consolidated billing role supersedes all other billing situations the beneficiary may wish to establish for home health services covered under the scope of the home health benefit during the certified episode.

Current law is silent regarding the specific terms of an HHA's payment to an outside supplier, and does not authorize the Medicare program to impose any requirements in this regard. We remain concerned, however, over the potential for the provision of unnecessary services, and will continue to evaluate approaches addressing this concern. One appropriate way to address any abusive practices would be through

more vigorous enforcement of existing statutes and
regulations (such as medical review procedures).
Furthermore, since under current law, an HHA's
relationship with its supplier is essentially a private
contractual matter, the terms of the supplier's payment
by the HHA must be arrived through direct negotiations
between the two parties themselves. Accordingly, we
believe that the most effective way for a supplier to
address any concerns that it may have about the
adequacy or timeliness of the HHA's payment would be
for the supplier to ensure that any terms to which it
agrees in such negotiations satisfactorily address
those concerns. Finally, we note that matters relating
to the enforcement of the statutory anti-kickback
provisions lie exclusively within the purview of the
Office of the Inspector General, and any questions or
concerns in this area should be directed to the
attention of that agency.

5. Effective Date for Consolidated Billing

    The effective date for consolidated billing is
October 1, 2000.